The Driving Force

(new)
Ensight
*(repeat)*
Contents

17 The Survey of a Natural Boundary
by Dave McWilliam A.L.S

20 Digital Plan Submissions

33 Discipline Decisions

35 The Technical Side
Prisms and Prism Offsets
by Chris Cothrun, Ingenuity Inc.

36 Legal Notes
Liability Insurance—Relief from Forfeiture
by Stephen Thiele

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In every issue

5 President’s Message
7 Councillor’s Forum
9 Editor’s Notes
12 Letters to the Editor
14 Association Notes
29 From the Registrar
31 PRB Guardpost
32 PDC Corner
37 ASSMT Notes
38 U of C News
Spectra Precision

(repeat)
Continuing Professional Development

In travelling across the country to our sister associations there is one theme that receives considerable attention. It surrounds the issue of mandatory continuing professional development. In fact, most professional land surveying associations have approved a form of continuing education and are now in the process of implementation.

It also quickly becomes evident that our Association has one of the best developed Systematic Practice Review programs across the country. As you are aware, we will begin a five-year round two Systematic Practice Review program early next year.

Questions now arise whether we really need to worry about competency in our field of practice. We can argue that our Practice Review Board would soon encourage any member found to practice in non-compliance of the Manual of Standard Practice to change their habits—quickly.

It is my view that if maintaining competency rests with the professional than surely he/she should be permitted to scope out his professional development program which is in harmony with his field of practice.

It would seem that any professional development program must accommodate the individual land surveyor’s professional needs and that is why there must be considerable flexibility if we are to develop a program which would serve the practitioners within the broad discipline of geomatics.

The Surveyor’s Dilemma

Our Association is facing a dilemma. Four years ago at the Annual General Meeting at Kananaskis, a motion was passed approving the investigation of continuing mandatory education. At our 1998 Annual General Meeting the motion to implement continuing mandatory education was defeated. Yet, I hear over and over again that our members are not opposed to continuing professional development, but they are against inflexible, non-compassionate types of mandatory regulations. The implementation process is also giving other professional associations the most difficulty. It is noted that in most cases the implementation of professional development is set up as bylaws, where revision can readily be accomplished.

Observations

It is somewhat ironic that this Association, which over 15 years ago worked so hard in establishing a center of excellence (U of C Surveying Engineering Program), is now faced with yet another educational challenge. Our members participate actively in community responsibilities. They attend meetings and the majority participate in various upgrade courses within their field of practice. In general, our members do not fear change. From the qualification criteria adopted by other professional organizations we would find that all our practicing members in good standing would meet the professional development standards.

Public Servant Issues

This Association has accomplished a great deal over the past two years and it will, I’m sure, find a solution to the professional development issue. We know that we are serving the public very well. Our knowledge of cadastral surveying and the tools that we use are efficient and cost effective. The problem is that the public has also become more knowledgeable and demanding. Remember that the public at large can now spend hours surfing the net on your area of expertise. Similarly, when I go to my dentist, I expect that he has the latest technology and that he will use his latest high-speed non-hurt drill on my tooth.

With present demands from the public, the option of doing nothing towards professional development, may not be acceptable and our responsibility in keeping abreast of technologies and land inventories may force us to find a better solution then what we have now.

As a new start, for example, I would see our land surveyors (practicing and retired) working with Council in designing a report card in 1999 that would be completed at the end of each year and held by the practitioner. After two years, a random request for a few report cards would be made. Similar to APEGGA, forward averaging could be incorporated—then it would be possible to complete the three year requirements in two years and start building towards the second three year period. Likewise, if it is seen that a practitioner is falling behind his target then a reminder would be issued by the Registrar. In the event that the land surveyor does not wish to participate continued on page 7
MicroSurvey

(new)
The last seven months have been a very busy time on Council and with the committees. It is now less than five months until the next AGM and already the committees have produced four new brochures. I would like to commend the members of the committees on their willingness to do the work and the Association’s staff on their very professional manner that helps keep the committees and Council on track.

The Alberta government has proposed amendments to the Surveys Act and the Land Titles Act. These amendments, among other things, are to make way for the implementation of digital plan submissions. Council has devoted a lot of time to digital plan submissions and will continue to make the government aware of our members’ concerns. I am surprised at the speed at which the government has been moving to implement this. The one thing that I have learned about implementing new technology is that there is a learning curve. I would, therefore, encourage everyone to start submitting a digital file in January 1999. Surveyors and Land Titles Office will need time to work out the glitches before June 1, 1999. Failing to start early may put you in the position of explaining to your client in June why their plan was rejected by Land Titles Office.

The implementation of digital plan submissions brought to my mind that our Association does not have Mandatory Continuing Education. The last proposal for Mandatory Continuing Education was defeated at the last Annual General Meeting as our members seemed uncomfortable with changes to the Land Surveyors Act and Regulations. However, two motions in Open Forum were brought forward. One to provide the Continuing Professional Development Guidelines to the Practice Review Board as suggested guidelines within practice reviews passed while the other to formally include the guidelines within the Systematic Practice Review Executive Summary was tabled.

I personally believe that if you are actively practicing land surveying today you are continually upgrading yourself. The attendance at the Association’s Least Squares course gives credence to this statement. The public, however, is asking the question why we do not have Mandatory Continuing Education when it appears that every other association has, or is in the process of, implementing it.

It has been suggested that if you do not have the technical knowledge, you just have to hire the right people. With this philosophy the surveyor can easily lose control of the process. While I believe that it is not necessary for every surveyor to have detailed knowledge of how AutoCad or other programs works, it is important that they understand it enough so that they can take full advantage of the tools while avoiding the pitfalls. Only continuing education can do this.

Our Association has seen vast changes in technologies in the last thirty years. How can we say to the public that we are technically current without a mandatory continuing education program? The question has been raised that as an Association do we want mandatory education? If it is not mandatory the only time it becomes the Association’s business is during a discipline case. Are we then serving the public interest?

In closing I would like to encourage you to communicate your thoughts on mandatory continuing education. The model presented at last AGM is a good basis to build on.

In this program, then, as with other associations, the Discipline Committee would be asked to consider the circumstances. Although the commission to practice could not be withheld, the issuance of a permit could be withheld for non-compliance. Once more, the focus of our Association should be to provide the tools for all our members to be accredited. I would be pleased to receive your comments over the next few months in order to help our Council form an opinion on this issue before our April 1999 Annual General Meeting.

In conclusion, I would like to acknowledge the great amount of work that has been done by Hugh Impey and his committee members in previous years. The system has stalled, but the principles remain valid. I believe it will be necessary for our Association to subscribe to mandatory professional development but we must take time to develop and choose the best model that will continue to accommodate all our practicing and retired members.
Leica

(new)
This time next year, we will be looking forward to the new year with tremendous anticipation—but also with tremendous dread. With the approach of Year 2000, many countries, cities and companies are planning huge millennium parties. Once 2000 is here, however, we may all have the biggest hangover ever.

The hangover comes in the form of the millennium bug or the Year 2000 problem or Y2K. By now, many of you have heard of the Y2K bug. The problem originated in computing’s early days when memory was limited and practically unaffordable. To overcome this, it became common practice to drop the first two digits of the year—1970 became 70 in the computer. Many systems, hardware and software, still work on this principle today.

In 1943, Thomas J. Watson, then Chairman of IBM remarked, “I think there is a world market for about five computers.” Today, there are millions of computers around the world running many simple household appliances (microwave ovens) to large complex systems (financial institutions). More importantly, most of the systems are interdependent. Surveyors, who provide services to clients, rely on their suppliers, who rely on the banks who invest in small, medium and large corporations. If one domino in the line should fall, there is the potential that all could fall.

Consider much of Quebec and Eastern Ontario which was shut down by a huge ice storm in January 1998. Businesses and homes were without power for weeks. Emergency power generators were being sold at two to three times their normal price. This region of Canada was entirely cut off. Now imagine the same type of scenario occurring throughout Canada or around the world at the same time.

No one is entirely sure what will happen but most experts agree that, if the worst happens, it could be devastating.

What Could Happen
- In 1992 Mary Bandar... was invited to join kindergarten because she was born in ‘88, in fact she was 104!!
- Paul Simmonds (52 years) checked his US passport issued last year and sure enough, the expiration date is 10 July 05. The customs officer, rejected it as being expired!!
- For Marks & Spencer, the nightmare began with a tin of corn beef, rejected on the ground that it was 96 years out of date!!

Marks & Spencers are auditing their 700+ suppliers for compliance!!
- During a routine shutdown of a 500 MW power plant in England, a date roll-over test was conducted on the control system. Twenty seconds after the date was changed, the plant shut down. The shutdown cause was traced to a “smart” flue stack temperature sensor. The sensor was programmed to integrate and average temperature over a specific time period to minimize fluctuation of the output temperature. The program in the firmware on the chip utilized a real-time clock that depended on the actual date to calculate the time differential.

Personally, I feel that the Alberta Land Surveyors’ Association is as well prepared as it can be for the Year 2000. However, if the power grid goes down, there is not a lot that we, or anyone else, can do. So what steps did we take?

First, we looked at all of our software systems and tried to determine if it was year 2000 compliant. As most of our software is Microsoft-based (what isn’t these days?), we looked at Microsoft’s definition of compliance:

“A Year 2000 Compliant product from Microsoft will not produce errors processing date data in connection with the year change from December 31, 1999 to January 1, 2000 when used with accurate date data in accordance with its documentation and the recommendations and exceptions set forth in the Microsoft Year 2000 Product Guide, provided all other


“Windowing?”

Windowing is a technique whereby the century-19 or century-20 date is determined by a “pivot” year value or cusp value and inserts the appropriate date. As two-digit dates are encountered, the software compares dates with the century prefix (19 or 20). For example, if the century prefix is 50, then any two-digit dates from 50 to 99 will be interpreted as 1950 to 1999 and 00 to 49 will be interpreted as 1900 to 1949. (Source: OnMark 2000 User’s Guide)

Microsoft Access 97 interprets dates entered with a 2-digit shortcut to mean the 21st century in the following way:

- 1/1/00 through 12/31/29 are interpreted as 1/1/2000 through 12/31/2029
- 1/1/30 through 12/31/99 are interpreted as 1/1/1930 through 12/31/1999

Microsoft will recognize the Year 2000 Compliant product from the Microsoft product. A Year 2000 Compliant product from Microsoft will recognize the Year 2000 as a leap year.”

Then, we ran a program called Assess 2000 which scanned all of our data files. It told us whether any of our databases or spreadsheets had “date issues” which might affect date calculations. We noted several date problems (Assess 2000 categorizes them according to severity levels) and each staff member undertook to rectify the problem. More importantly, we discovered how many pre-installed pieces of software had date issues.

Finally, we looked at our internal hardware. This included a review of all of our CPUs, monitors, modems, printers and other peripherals.

We thought that testing our computer systems would be easy. Simply move the computer’s clock ahead to 11:59 p.m. of December 31, 1999 and see what happens. If the computer doesn’t immediately crash, then your test worked. It’s a simple theory.

I wasn’t sure what all of this meant, so we turned to their web site for a list of what will work in year 2000 and what will require upgrades.

It can be found at http://www.microsoft.com/year2000/. From this site, you can go to their product guide and find out whether specific Microsoft products are Year 2000 compliant. As of November 27, 1998, this is what Microsoft says about some of its more popular software:

- **Access 2.0**
  - Not compliant
- **Access 97**
  - Compliant
- **Excel 97**
  - Compliant
- **Internet Explorer 4.x**
  - Compliant with Minor Issues
- **PowerPoint 97**
  - Compliant
- **Windows 95**
  - Compliant with Minor Issues
- **Windows 98**
  - Compliant

For other peripherals, we had to check the manufacturer’s web site. This was a relatively simple, yet time-consuming, exercise. It did not take us long to realize how many different pieces of hardware we have and the different pieces of software that run them.

Once we downloaded the patches from Microsoft and other vendors, we turned our attention to other internal office equipment which might have embedded computer chips. We checked our phone, photocopier and fax machine. The photocopier and fax machines passed with flying colours but the phone required a software update.

We found two older systems (two years old) that did not pass the test but fortunately, the recent ones did. We verified the NSTL results by checking the computer manufacturer’s web site.

When Is The New Millennium?

A millennium is a period of 1000 years. The question of which year is the first year of the millennium hinges on the date of the first year AD.

Unfortunately the sequence of years going from BC to AD does not include a Year 0. The sequence of years runs 3 B.C., 2 B.C., 1 B.C., AD 1, AD 2, AD 3 etc. This means that the first year of the first millennium was 1 AD. The one thousandth year was AD 1000 and the first day of the second millennium was AD 1001.

It is thus clear that the start of the new millennium will be January 1, 2001.

SOURCE

http://www.compinfo.co.uk/y2k/greenwich.htm

www.nstl.com/html/y2k.html

This utility checks the system’s BIOS to:

- Verify real-time progression from December 31st, 1999 to January 1st, 2000. If real-time support fails, then the ability to set the date manually is checked.
- Verify recognition and support of leap years from 2000 through 2009.

See also:

- “Assess 2000” from NSTL
- “Where Is The New Millennium?”
- “2000 Checklist” from NSTL
- “A Millennium Is A Period Of Two Thousand Years” from NSTL
- Microsoft’s 2000 web site
- OnMark 2000 User’s Guide
- “Windowing?”

To check our CPUs, we downloaded NSTL’s year 2000 readiness test. It is available free of charge from their web site at http://
upgrade. For a small fee, we now have a Y2K compliant phone system.

At long last, we looked outside of the Association office to check if our suppliers are Y2K compliant. Over the past summer, we mailed out almost 100 letters asking our suppliers if they will be ready to meet our needs in the next millennium. The response, I admit, was disappointing. Approximately half of the suppliers did not respond while many of the others could only respond in general terms. In retrospect, the response is not surprising given that no one really knows what might happen when the clock strikes twelve. Regardless, we do have a better appreciation for who is prepared (as prepared as they can be). This has enabled us to prepare contingency plans just in case the bank’s computer crashes or the elevator won’t reach the 25th floor.

I do not mean to sound alarmist. Nor do I pretend to know what actually will happen. It’s just that when I read about the army and police cancelling vacations for the first three months of 2000, it makes me stop and think. That is why we have taken some basic precautions at the ALSA office.

Now that you are Y2K compliant, pop the top on that bottle of champagne to celebrate the new millennium. Then get ready to solve the Y10K problem. The Year 10000 is just 8,000 years away!

Looking for...... individuals who are interested in taking a Least Squares Estimation and Data Analysis course as well as a Geodetic Positioning course at the University of Alberta as a benefit (possibly credited course) towards the Western Canadian Board of Examiners professional examinations. Candidates working towards their Canada Lands Surveyor and Alberta Land Surveyor commission would greatly benefit. If interested, or for more information, please contact Rob Dollevoet at (403) 495-2399 or e-mail at rdollevo@nrcan.gc.ca.
Approvals and Reclamation Certificates

Effective April 15, 1996 Alberta Environmental Protection started charging fees for applications for Approvals and Reclamation Certificates required by the Environmental Protection and Enhancement Act (EPEA).

The fee structure is based on a charge for each new approval, renewal or amendment application. The amount of the fee is linked to the complexity of the activity and the level of service needed to review and process the application.

The application fee for a Reclamation Certificate is $300. Applications that include several sites will require $300 for each site.

A copy of the fee schedule and the five categories is available from the Regional office. Please note that municipalities are not required to pay application fees. Also, those operators who have already paid an application fee for an EPEA approval do not have to pay a fee when they apply for a Reclamation Certificate.

Applications will not be processed until the fee is paid. This fee is non-refundable once the technical review of an application has commenced.

To avoid delay in processing your application, please submit the fee, in the appropriate amount, with your completed application to the appropriate address listed below. If an application is rejected because it is incomplete or if a site has not met the reclamation criteria for a Reclamation Certificate, a new application and fee will be required. Fees should be made payable to the Provincial Treasurer.

Approval, Renewal, Amendment
Regulatory Approvals Centre
Environmental Service
Alberta Environmental Protection
Main Floor, 9820 - 106 Street
Edmonton, Alberta T5J 2J6
Tel: (403) 427-6311
Fax: (403) 422-0154

Reclamation Certificates on
Green Area Public Lands
Roads and Reclamation Unit
Land Administration Division
Alberta Environmental Protection
3rd Floor, 9915 - 108 Street
Edmonton, Alberta T5K 2G8
Tel: (403) 427-3570
Fax: (403) 427-1185

Reclamation Certificates on
White Area Public Lands
Public Land Management Branch
Alberta Agriculture
Food and Rural Development
200, 7000 - 113 Street
Edmonton, Alberta T6H 5T6
Tel: (403) 427-6597
Fax: (403) 422-4244

Reclamation Certificates on
All Other Lands
Regulatory Approvals Centre
Environmental Service
Alberta Environmental Protection
Main Floor, 9820 - 106 Street
Edmonton, Alberta T5K 2J6
Tel: (403) 427-6311
Fax: (403) 422-0154

Presidential Tour

On behalf of Dave Williams, myself and the other land surveyors in the Lethbridge area, I would like to convey my appreciation to the president and others of the entourage who took time out from their busy work schedules to include Lethbridge in the presidential tour for 1998.

Being able to discuss the current “burning” issues at the Council level, certainly gives one a better perspective of where we, as an Association, are heading as we approach the Year 2000.

I must mention that it was especially rewarding to me to have the President, et al, visit Lethbridge on my birthday. This fact I neglected to mention to the group when there were here as no one of my age normally admits to having a birthday. However, the staff at Brown, Okamura who are very special to me, were very cognizant of the day and prepared a birthday card for me. As considerable thought and resources went into the preparation, I felt that it would be appropriate to share this “gem” with you and perhaps the membership at large.

May all your meetings be rewarding and short.

ROBERT F. BAKER, A.L.S.
Forced Destruction of Alberta Survey Control Markers on Private Property

Over the last year, the Geodetic Control Section has been asked to destroy three Alberta Survey Control Markers (ASCMs) on private property at the request of the landowners. In all three situations, the landowners expressed great concern for safety of livestock potentially tripping in holes left by “surveyors” for markers below ground level as well as a constant annoyance of having “surveyors” accessing the control marker without the consent of the landowners. There is also concern over liability related to the open hole if an animal or person were injured while walking in a field as well as potential injury from survey stakes left behind. Unfortunately, none of the landowners could provide information on which surveying companies had been doing work at the markers. The Geodetic Control Section investigated and complied with two of the landowner requests and subsequently removed the markers. The third landowner has agreed to wait and see if the situation can be rectified by other means such as a notice on the ASCM ID card telling users to contact the landowner before accessing the marker.

The Section recognizes that Alberta Land Surveyors (or their assistants) may enter onto private property in order to access a control marker. However, they do have the obligation to use the utmost care and attention including cleaning up their site and filling in any holes that may have been dug to access a control marker. As the government organization responsible for the provincial spatial referencing system, we are requesting that the Alberta Land Surveyors’ Association reiterate to their members their responsibility to landowners when entering onto private property to access an ASCM.

In Alberta there are approximately 29,500 usable and accessible ASCMs with over 3,000 on private property. The potential loss of these markers on private property is very significant and will have a detrimental effect on the continuity of the network. Additionally, there may be increased costs for Alberta Land Surveyors due to the lack of control markers because they have been destroyed for no other reasons than those outlined above. Your cooperation in helping to rectify this situation is greatly appreciated.

GeoF Banham, P.Eng.
Project Leader, Geodetic Control Section

Debut of New Edition of Our Petroleum Challenge

Through five editions and 550,000 copies, the Petroleum Communications Foundation’s flagship publication, Our Petroleum Challenge, has become the premier introductory guide to Canada’s oil and gas industry. For more than 20 years, it has helped new petroleum industry employees, numerous students, educators, the media, politicians, the investment community and the general public learn about one of Canada’s most important resources.

The Foundation will release a new edition of Our Petroleum Challenge—Exploring Canada’s Oil and Gas Industry, in early 1999. In addition to a fresh new design and completely new photos and technical illustrations, the publication’s content has grown by more than 60 percent, to better reflect the increased scope and dynamism of Canada’s petroleum industry.

French and electronic editions of this publication will also be available. Please contact the Foundation by phone (403) 264-6064, fax (403) 237-6286 or e-mail at pcomm@pcf.ab.ca to obtain an order form.

Quad Quandary

I expect that there have been close to two hundred “quads,” in addition to numerous snowmobiles, stolen from survey companies. As well, Universal Surveys Inc. had vehicles stolen and then abandoned once the quads were unchained and taken from the vehicle—and you know of the many other trucks and survey equipment that were stolen.

The RCMP has, in our experience, not devoted much time to this problem. It is not a high priority item with their many other problems.

I and others strongly suspect that, with exceptions, the theft of quads is an organized effort.

It is likely that our police forces and our insurers will not be able to respond to individual thefts, but perhaps a combined effort by our members, initiated through our Association, and with the help from our insurer or other associations experiencing the same problem, the extent of the problem can be brought, with extra force, to the attention of the RCMP or those others who can help.

Perhaps something can be done, or perhaps not. But it remains a two million dollar problem and deserves some attention.

Regards and Merry Christmas,

Con Zarowny, A.L.S.
New Members

#637
KOCHER, Mark Steven

Mark was born at Lacombe, Alberta on February 5, 1965. He graduated from Lindsay Thurber Comprehensive High School of Red Deer in 1983 and received a B.Sc. in Surveying Engineering from the University of Calgary in 1989.

Articles were served under R.W. Robinson, A.L.S., R.J. Wilkins, A.L.S. and D.N. Marquardt, A.L.S. The topic of the technical report submitted as part of the qualifying examination was “Wellsite in Unsurveyed Territory.” He received his commission as an Alberta Land Surveyor on September 21, 1998.


Hobbies include hockey, rollerblading, and music.

#639
EWEN, Shaun

Shaun Ewen was born in Brandon, Manitoba. He graduated from Vincent Massey High School in 1988 and went on to receive a B.Sc. in Geomatics Engineering in 1995.

Articles were served under R.M. Wallace, A.L.S. “A Proposed Change to the Alberta Land Surveyors’ Association Examination Process” was the topic of the technical report submitted as part of the qualifying examination. He was granted his commission as an Alberta Land Surveyor on October 7, 1998.

Surveying experience includes oilfield, subdivision, construction, and Indian reserve retracements.

Shaun is married to Jennifer. Hobbies include mountain biking, music, palm reading, and vacationing.

#640
HARDING, Timothy Jon

Tim Harding was born in Fredericton, New Brunswick on January 14, 1959. He graduated from St. Stephen High School in 1977 and went on to receive a B.Sc. in Survey Engineering from the University of New Brunswick in 1982. Tim also holds a Technician’s Diploma from the Nova Scotia Land Survey Institute.

Articles were served under A.N. Zaver, A.L.S. The report submitted as part of the qualifying examination was titled “Use of the Global Positioning System in the Development of a Crane Collision Avoidance System.” Tim received his commission as an Alberta Land Surveyor on October 9, 1998.

Surveying experience includes working with Canadian Engineering Surveys Ltd. in the Beaufort Sea, offshore mapping from 1980 to 1984, and offshore and international projects with Challenger Surveys & Services Ltd. from 1985 to 1993. Tim is currently employed as a project manager in cadastral and engineering projects for Challenger Surveys & Services Ltd.

Hobbies include bird hunting and coaching soccer. Tim, his wife Ann, and their two girls Amanda and Elizabeth reside in Edmonton.

Retired Alberta Land Surveyor requires older transit and tripod for birdwatching and star gazing.

Please contact:
Roy J. Wilkins
Phone: 240-1592
E-mail: 41040368@3web.net
#641
GILLMORE, Duncan C.

Duncan was born in Edmonton, Alberta on January 28, 1958. He graduated from McNally Composite High School in 1976 and went on to receive a B.Sc. from the University of Alberta in 1981 and a degree in Survey Engineering (P.Eng.) from the University of New Brunswick in 1987.

Articles were served under his father, Duncan B. Gillmore, A.L.S. “Legal Survey of Highway No. 63, Ruth Lake to Mildred Lake: Townships 92, 93; Range 10, West of the Fourth Meridian” was the topic of the technical report submitted as part of the qualifying examination. He was granted his commission as an Alberta Land Surveyor on November 4, 1998.

Duncan serves as a member of the ALSA Professional Development Committee for 1998/99.

Surveying experience includes subdivisions, condominiums, construction, and oilfield.

Duncan and his wife Lorene reside in Edmonton with their three children, John, Callen, and Mary. Hobbies include reading, fishing and family related activities.

Corrections/Changes to the Register

Every year after publication of the Annual Register, a raft of changes/corrections are submitted to the Association office. Please continue to keep the office informed of any changes so that our membership database can be kept current.

Ram Achal, A.L.S. has commenced employment with Loeppky and Associates Surveyors Inc. effective October 5, 1998.

AMAR Surveys Ltd. has relocated to 818 - 16 Avenue N.W., Calgary T2M 0K1. Tel: 289-1220, Fax: 289-1299, E-mail: amar@telusplanet.net.

Warren Barlow, A.L.S. is employed by Douglas Surveys Inc. in Calgary effective August 31, 1998.

Barry Fleece, A.L.S. is currently employed by All West Surveys Ltd. in Calgary effective September 1, 1998.

Geodesic Surveys Ltd. has merged with All West Surveys Ltd. effective September 1, 1998.

New Associate/Affiliate Members
Heck, Wade ....................... AS018
Phillips, Chris .................... AF002

Net Notes

In undertaking a review of Year 2000 issues, it was discovered that there are two types of Y2K web sites—serious ones and humorous ones. It seems that even in the face of possible worldwide upheaval, we still know how to make fun of ourselves. Here is a of some preferred Y2K web sites:

Serious Y2K Websites
This Is Your Final Wake Up Call
www.tma.org.uk/industry/millenium/BTGY2K.htm

Welcome to Can2K
www.can2k.com/English/index.html

Validating Year 2000 Compliance
www.keane.com/capabilities/tstqa2k3.shtml

Testing The Year 2000 Date Change

Year 2000 Date Problem—Support Centre
www.compinfo.co.uk/y2k.htm

The Year 2000 Information Centre
www.yer2000.com/

Fun Y2K Web Sites
The Stupidest Thing Said About The year 2000 Problem
Duh-2000.com/
(Sample: “The current release is Year 2000 compliant and the next release will be even more Year 2000 compliant.

100 Steps to Kill The M Bug

The Coolest Y2K Countdown Screen Savers
www.y2ksavers.com/

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Phillips, Chris .................... AF002

You Are Invited

The Historical and Biographical Committee invites all members to contribute examples of statutory posts throughout the years and any other historical items, such as surveyors’ chains.

The Committee intends to place these items on display at the ALSA office.

If you have any items which might be of interest, please contact the Association office at:
2501 CN Tower • 10004 - 104 Avenue
Edmonton, Alberta T5J 0K1
Tel: (403) 429-8805 or 1-800-665-2572
Fax: (403) 429-3374 • E-mail: admin@alsa.ab.ca

December 1998
www.alsa.ab.ca
Surveyor, Cadastral Services

Northern Regional Operations Centre
Natural Resources Canada

Yellowknife, NWT

This challenging and rewarding temporary opportunity (until March 2001) is open to Canadian residents. A qualifying list will be established and may be used for similar positions.

You will be leading a cadastral survey group preparing project specific survey instruction for the survey of Canada Lands; examining survey returns for surveys of Canada Lands and of lands which are proposed to become Canada Lands; managing contracts and internal projects; and preparing legal descriptions and carrying out Canada Land survey related projects. The salary range for this position is $44,747 to $56,308 per annum, plus isolation post and accommodation allowances.

You are a graduate with a degree from a recognized university with an acceptable specialization in land survey theory and practice or similar related field such as geomatics, geodetic sciences or remote sensing OR possess a Commission as a Canada Land Surveyor with experience providing professional survey service and advice to various client groups with land management responsibilities or property definition requirements on Canada Lands or proposed Canada Lands.

Proficiency in English is essential, and you must be able and willing to work in a field situation. A medical examination will be required.

If you are interested in this temporary opportunity, please send your resume clearly describing your relevant qualifications, indicating your citizenship and quoting reference number RSN8856CR75-P. by December 31, 1998, to the Public Service Commission of Canada, Room 830, 9700 Jasper Avenue, Edmonton, Alberta T5J 4G3. Fax: (403) 495-2098. E-mail: pscedm@psc-cfp.gc.ca To apply on-line visit our website at: www.psc-cfp.gc.ca/jobs.htm

We thank all candidates who apply and advise that only those selected for further consideration will be contacted. Preference will be given to Canadian citizens.

We are committed to Employment Equity.

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Arpenteuse ou arpenteur, Service du cadastre

Centre des opérations régionales du nord
Ressources naturelles Canada

Yellowknife (T.N.-O)

Ce poste temporaire prenant fin en mars 2001 et présentant des perspectives stimulantes et valorisantes est offert aux personnes résidant au Canada. Une liste d’admissibilité sera établie et pourra servir à doter des postes similaires.

Responsable d’un groupe effectuant des levés cadastraux, vous préparerez des instructions d’arpentage concernant des projets spécifiques d’arpentage des terres publiques, examinerez des rapports concernant les terres publiques ou de terres publiques proposées, dans le cadre des contrats, effectuerez des travaux de recherche sur les plans cadastraux et préparerez des désignations cadastrales en plus d’exécuter d’autres projets connexes au domaine de l’arpentage. Vous toucherez un salaire, calculé selon une base annuelle, variant entre 44 747 $ et 56 308 $, en plus d’une indemnité d’hébergement de poste isolé.

Vous devrez posséder un diplôme d’une université reconnue avec une éducation acceptable en arpentage (théorie et pratique) ou dans une autre discipline connexe telle que la géomatique, les techniques géodésiques ou la télédétection OU un titre professionnel de la Commission de l’arpentage du Canada. Il vous faut également avoir acquis de l’expérience dans la prestation de services cadastraux et de conseils à différentes clientèles responsables de la gestion des terrains ou de la définition des biens fonciers touchant les terres publiques ou les terres publiques proposées.

La maîtrise de l’anglais est essentielle, et vous devez être prêt ou prête à travailler sur le terrain. Un examen médical sera exigé.

Si ce poste temporaire vous intéresse, veuillez faire parvenir votre curriculum vitae d’ici le 31 décembre 1998, en indiquant clairement la pertinence de votre qualification ainsi que votre citoyenneté et le numéro de référence RSN8856CR75-P à la Commission de la fonction publique du Canada, 9700, avenue Jasper, pièce 830, Edmonton (Alberta) T5J 4G3. Télécopieur : (403) 495-2098; courriel : pscedm@psc-cfp.gc.ca. Pour postuler par voie électronique, visitez notre site Internet à : www.psc-cfp.gc.ca/jobs.htm

Nous remercions tous ceux et celles qui soumettent leur candidature; toutefois, nous ne communiquerons qu’avec les personnes choisies pour la prochaine étape.

Nous souscrivons au principe de l’équité en matière d’emploi.

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Public Service Commission of Canada
Commission de la fonction publique du Canada
The Survey of a Natural Boundary
by David R. McWilliam, A.L.S.

The following is a synopsis of a report that I did on the Clear Lake Project in southern Alberta in 1990. It was one of many water conservation projects that the Government of Alberta had on the books. The project resulted from many years of lobbying by the local community, as, prior to the lake drying up, it had become a local recreation area of high use.

When I was asked to get involved in the project, Clear Lake was completely dry, and had been dry or very low for a considerable time.

First, I had to determine if a natural boundary even existed in 1990 or had the upland vegetation completely migrated over the entire old lake bed, possibly eliminating any crown claim to ownership of the bed.

Second, did the natural boundary of the “intermittent water” as shown on the various versions of the township plans exist in 1990.

Third, if a lake bed does exist in 1990, the position of the natural boundary was to be determined and surveyed so as to enable the provincial government to purchase the privately owned land between the natural boundary and the full supply level at which the lake was intended to be maintained by flooding.

In addition to the report, I obtained the following data to help in evaluating the circumstances that existed in 1990 and to also give me a “feel” for the history of Clear Lake:

- A copy of each original land grant for comparison with current titles.
- A copy of all versions of the township plans involved.
- A copy of every existing historical air photo of the lake area.
- A copy of all township notes that pertained to the lake and the section line fabric for every version of township plans previously issued.
- A copy of all existing legal plans.

The following report lists the facts that led me to the end result, namely that the “intermittent water” area north of the main body of the lake did not exist, and the bed of Clear Lake did in fact exist in 1990, even though the lake was dry and had been for some time.

Clear Lake is located in the vicinity of the N.E. Section 36, 13-26-4. As a “natural boundary” is no more or less than a property line, the determination of its position falls within the jurisdiction of Alberta Land Surveyors and the location survey of the “bank” of Clear Lake must be performed in adherence with the standards as outlined in the Surveys Act (Chapter S29.1) of the Statutes of Alberta, 1987, within Sections 17 (2) and 17 (3).

These sections of the Surveys Act are very general and very specific at the same time. The portion of Section 17(3) that reads “the bed and shore of a body of water shall be the land covered so long by water as to wrest it from vegetation or as to mark a distinct character on the vegetation where it extends into the water or on the soil itself” is a general description of what defines a natural boundary, but only leads you to more research on what defines a change in vegetation or soil. The following is an account of the details and decisions that resulted in the determination of the natural boundary in different areas around the lake, and then putting these pieces together.

West Side of Lake

A number of spots were picked on the edge of the lake bed, where, below the spot, there was no salt grass [Distichlis stricta (Torr.) Rydb] found and above the spot there was salt grass found. These spots were all on the west side of the lake (the sheltered side). The elevation of these spots were all within 0.05 metres of being 963 metres geodetic elevation. The locations of these spots ranged from the creek inlet area to the area south of the park, which is situated in the vicinity of the NE 36, 13-26-W4M.

There was other vegetation found above and below these spots:

- Sweet clover seems to be creeping into the bed but has only crept in over the last three or four years. Sweet clover is opportunistic and will grow on exposed ground and is spread by seeds, so the creeping will be slow and inward.
• Foxtail barley (Hordeum jubatum l.) has infested the bed almost totally. It has airborne seeds which enable it to spread much faster.

The two weeds, sweet clover and foxtail barley, have an overlap area where the tall clover is gradually starving the foxtail of sunlight. No other vegetation, that requires a long term dryness to establish itself, was found below the “pick spots.”

The above points and conclusion have been reviewed and concurred with by Varge Craig, who is a Land Resource Agrologist with Alberta Forestry, Lands and Wildlife, Public Lands Division, in Lethbridge.

South Side of Lake

The south end of the lake was found to be the same, vegetation-wise, as the west side of the lake. The elevations of these “pick spots” were within 0.3 metres of being 963 metres.

There seemed to be an intermittent “bank” along the south side. This was caused by a little more wave action due to the lake’s northwest/southeast alignment allowing for slightly more prevailing wind action to erode the bank. The vegetation encroachment concurred with the bank location, therefore it was decided to use this bank as the location of the lake bed.

North Side of Lake (Main Body)

The north end of the lake was found to have salt grass below the “pick spots.” However, the rhizome lines were very evident indicating that it has had more opportunity to encroach but has not been able to “infill” itself. This is due to the flatness of the bed at the north end. We observed, within Section 12, the bed has an average slope of 0.4%. With a drop of 0.1 metre of the water level, it would expose 25 metres of lake bed. This would give the salt grass more opportunity to encroach in the slightly drier years.

We understand the last permanent water was seen in 1985. However, given the flat nature of the bed at the north end, it would have been exposed, at least part of each year, far longer than just the last five. The salt grass could have survived submersion during the spring and enjoyed better growing conditions as the lake receded during the drier months.

In the north area, we found that above the “pick spots” the salt grass achieved an “infill,” but below it the rhizome lines were evident.

Above the “pick spots” the foxtail barley is slowly being choked out, but below the “pick spots” the foxtail gets progressively thicker as you move to the lower areas.

In the north east area of the lake, the abundance of Kochia weed was greater below than above the “pick spots.” This area is the transition between the north end, which has shallow slopes and is more sheltered, and the east side of the lake which has a much less stable “bank” and has been subjected to soil drifting action.

East Side of Lake

Along the east side of the lake, the original bed has been covered by the natural drifting of the alkaline soils from the exposed dry lake bed. As the soils drifted and covered the existing ground and vegetation along the east side, they created ideal growing conditions for Kochia weed, which is an annual weed. Kochia weed is grown by some of the areas farmers for cattle feed and an abundance of seed is available for this infestation.

When the weeds grew, they immediately caught more drifting soils and were covered up again and again. The exposed soil was available for more weed growth and the occurrence repeated itself until there was an average of two feet of drifted soil laying on the old bed.

A few spots were found above the “pick line,” which had salt grass in an infill state. These grass areas seemed to be surrounded by taller Kochia
weed and, therefore, it is assumed they escaped the major portion of the drifting and have been able to survive and grow up through some minimal deposits.

Below the “pick line” is almost exclusively, very thick, kochia weed until we came to the foxtail barley.

The elevation of this “pick line” along the east side of the lake was approximately 963.3 metres or 0.3 metres higher than the west side of the lake. This is due to the exaggerated wave action on the east side of the lake from the prevailing westerly winds in the area, and also from the deposition of eroded soils.

Due to the drift soil deposits being a natural occurrence, it has been decided to accept the present bed position, as the existing vegetation suggests it to be. It should be noted that upon excavation to the original bed level and finding a sand/gravel base, the horizontal location of the edge of the older bed appears to be only minimally different from the location chosen. This is due to the shore line being much steeper on the east side of the lake.

**Low Area Lying North Of Main Lake Bed**

Regarding the “low lying area which is subject to flooding” further north of the lake, it has been determined that this area has salt grass, and Nuttalls Alkali grass [Puccinellia nuttalliana (Schultes) Hitch.] throughout it. A small amount of foxtail barley is also present. This indicates that although the area may get water in flood years, it does not stay long enough to exterminate the salt grass, which is upland vegetation only.

A “lake” has not been “excepted” on any of the titles in question or the original grants to these lands, and therefore it was the intent of the original grant to issue these lands to the original owners.

The 7th May, 1884 version of the plan of Township 14, Range 26, W4M. does not even note the area as being subject to flooding.

The 22nd March, 1918 version of the same township plan indicates the area to be “low land liable to flooding” or intermittent water.

Therefore, we consider the flooding of this area to be of a temporary nature that has had little or no effect on the vegetation, and that it is not part of the lake in 1990 and that Public Lands has no claim on it. Varge Craig has reviewed the area and agrees with the interpretation.

**Special Points**

It should be noted that the “pick lines” have been reviewed, and concurred with, by Public Lands Representative - Varge Craig, in the field.

The M.D. Park in the S.E. 1/4 1, 14-26-4 has had a “man-made” effect on the shore line of the lake and has been ignored for the purpose of this survey. The location was approximated using points on either side of the Park, which do not show any signs of “tampering.”

The inlet creek bed has been excluded for the purposes of this report.
Digital Plan Submissions

What’s Going On?

The following are excerpts of letters respecting digital plan submissions. Because of space restrictions in ALS News, the letters have been edited. All the letters in their entirety have been forwarded to Alberta Registries for their information and consideration.

Members wrote ...

“I have reviewed the proposal regarding submission of digital plans of survey for registration at Alberta Registries. The concept of digital plan registration may in itself be a good idea, however the proposal goes much further than merely plan submission. This proposal demonstrates a concept of digital data distribution of which the Alberta Government and Spatial Data Warehouse would be the owners and distributors of the Primary Graphics Database for the province.

The parcel mapping has been sold to the municipalities and many other users including surveyors, engineers, planners and industry participants. The system in place for maintenance and population of the system is outdated and does not utilize up-to-date technology for purposes of minimizing day-to-day cost.

The process of dealing with plan information by layering various components of the plan will lead to a mass of unrequired information which will cost taxpayers an enormous amount in the future to manage.

I am not prepared to address all of the specific problems that may arise out of the Alberta Registries proposal because it frankly will not work in the future.”

L.R. OLSON, A.L.S.
L.R. OLSON & ASSOCIATES LTD.

“...We have reviewed the draft and concur for the most part with the proposal. However, we feel it would be more efficient and co-operative if only one layering scenario was required when dealing with digital submission for both the registries system and the affected municipality, i.e. Calgary/Edmonton. Thank you for the opportunity to respond, and we look forward to the successful implementation of this program.”

E.G. LYSER, A.L.S.
SUNBOW CONSULTING LTD.

“...there are a couple of general comments I would like to make. This particular draft policy has only addressed urban surveys. Different level/feature description specifications would have to be developed for right of way, monument, road plans, etc.

The issue of provision of parcel mapping files for preparation of legal plans only—while I can understand buying parcel mapping files for composite mapping purposes, will I have to buy the files if I value add to the legal base for say construction, crossing and/or individual ownership plan preparation?”

J.D. WALLACE, A.L.S.
CAN-AM SURVEYS LTD.

“...Digital Plan Submission: Although a perceived value to land surveyors in the registration process, I would suggest that 99% of our firm’s registrations involve documents; therefore, unless documents can be submitted electronically, I see no advantage to our firm. The only advantage would be if the registration process is sped up.

...I would also question to what advantage or gain my client would receive from this additional charge of $100 a plan. It would seem to me that it is the responsibility of the end user to pay for this service (i.e. the people who see the product as having value).”

J.M. BYRNE, A.L.S.
PALS SURVEYS AND ASSOCIATES LTD.

The following report is a response to the above captioned document that has been addressed by the Alberta Land Surveyors here at SESL Geomatics Ltd. It will be addressed in some detail pertaining to those specific sections as outlined in the draft document itself.

Collection of a Fee for the Updating of Cadastral Mapping: At the present time and over the past couple of years, the land surveyors at SESL Geomatics Ltd. have registered on the average, some 500 to 700 plans/year since 1994, primarily of the right-of-way nature. At this present rate and at a cost of $100/plan, this represents an increase of the sum of $50,000 to $70,000/per invoice to some already very cost-conscious clients, and for what value? Our present requests for cadastral mapping fabric amounts to $15,000 to $20,000/year, so even to expect the equivalent dollar value return in mapping fabric at this point in time, is not something that is of any added value to us or our clients. For the project areas that we are involved in on a large scale, we are or will be compiling maps of our own or in cooperation with other survey companies, so why should we pay SDW for some stuff that we are already doing?

Increased Expense for Surveyors: Like most survey companies, we utilize CAD formats for our plans.

To date, SDW has not found a market for its product willing to pay the fees they are charging. Why then are we attempting to endorse a fee for product nobody appears willing to pay for?

It is also my understanding, in discussion with several municipalities, that they may be moving towards creating their own digital base as the cost to maintain, update, and in the future, sell this data is not practical.

I have also only heard the words ‘may’ and ‘might’ with regards to price and distribution to the survey community.”

J.M. BYRNE, A.L.S.
PALS SURVEYS AND ASSOCIATES LTD.
However, for submission purposes, we as land surveyors at SESL Geomatics Ltd. agree that a TIFF file is all that is needed to replace the normal mylar that we presently submit for registration. The other digital data that is “turned off” when plotting the legal plan is information that was picked up for our clients’ benefit and sole use and not as a matter of public record. Whether the data is for sale or for other uses cannot be done without our clients, or our consent.

Summary: digital submission of plans is a forward step. The benefits as listed in the draft document’s corresponding section are not really benefits unless the items and concerns that we have brought up here are addressed, both from a Land Registries viewpoint and from our point of view in the private sector; where speed, service, convenience and cost efficiency to our clients are the guiding factors. The issue of submitting our data and our clients’ data in CAD form and paying an additional $100/plan for SDW mapping purposes...is not to our benefit at all.”

— D.N. MARQUARDT, A.L.S.
R. MORRISON, A.L.S.
M.S. KOCHER, A.L.S.
C.E. HENRIE, A.L.S.
J. HUME, ARTICLING STUDENT
SESL GEOMATICS LTD.

...I have reviewed the draft copy of the Policy & Procedures Manual for submission of digital plans of survey or registration. I did not have any major concerns. I would like to propose an amendment to the drafting standard in the subdivision plan. The current practice is to put a circle (donut) where the iron posts are placed in the legal plan. We feel it would not be necessary to do that as long as it is shown in the legend that ‘all lot corners created by registration of this subdivision are planted with a statutory iron post, except as shown’...

— T. TO, A.L.S.
LOVSE SURVEYS LTD.

...While I agree with the concept that we must all strive to use digital data to its greatest potential, it is my opinion that our Association should not blindly endorse the proposal unless we have a clear understanding of all the issues involved. In particular, we must ask ourselves who will derive the benefits and who will pay for implementation and ongoing costs.

Clearly this is an attempt to salvage something useful out of the Cadastral Mapping program. After spending literally millions of dollars on the program, the Government discovered that their revenue projections were completely wrong, probably because you and I as average potential users, were not willing to pay the high cost for their product. This essentially left only the major cities and major utility companies as the users. They have now come to the conclusion that ongoing maintenance of the mapping system is also a costly proposition and they would like to dump the financial responsibility into the laps of the land surveyors and their clients...

In closing, I would suggest that Council should consider the following question. Isn’t it about time we stopped the mapping tail from wagging the survey dog?

— T.P. SKINBERG, A.L.S.
THE FOCUS CORPORATION LTD.

...After reviewing the document a number of concerns remained.

The principle area of concern is the security of the plan during and after its submission to the Land Titles Office. How will digital or electronic signatures be accommodated? How will additional signatures and endorsements, extra to the surveyor’s stamp and signature be addressed? It would be desirable that any plan which is retrieved from the registry and subsequently altered would lose evidence of the signatures and therefore be distinguishable from an official plan....

— LEE MORDEN, ARTICLED STUDENT
LOEPPKY & ASSOCIATES SURVEYORS INC.

...Although an advocate of digital plan submission, I am completely against the proposed $100 digital integration fee being introduced through the Surveys Act. Personally I feel this was an underhanded move on the Director of Surveys part without any regard to the members of the Alberta Land Surveyors’ Association. Why doesn’t Land Titles administer this fee? It will be a tough pill for our clients to swallow the fee, and a special hardship for the surveyors to explain that the fee is a result of a change. My understanding is that there is a current overrun of approximately $1,000,000 every year to maintain the cadastral data. Current projections indicate that in 1998, approximately 9,600 plans will be registered at LTO. The fees collected will be about $960,000, or almost enough to cover the overrun. The cities of Calgary and Edmonton are excluded from SDW’s area of compilation, therefore, this $960,000 would flow through to facilitate the integration of only 7,500 plans....

— C.A. MCBRIDE, A.L.S.
MCELHANNEY LAND SURVEYS (ALTA.) LTD.

...Increased Expense to Surveyors: Benefits listed include the ability to search online. Item 1.10 refers to the ‘Potential of online search and ordering...’ There is a big difference between potential and actual—will it really happen? If searches are possible online, will plans not presently compiled (abandoned plans, establishment of monument plans) be included in the search?

— D.J. LUNTY, A.L.S.

The ALSA wrote...

“November 6, 1998

Dear Sirs:

Thank you very much for your presentation to our Council meeting on October 26, 1998.

As a result of the meeting, Council endorsed the concept of digital plan submissions and agreed to continue working with all stakeholders to ensure that a satisfactory compromise can be reached for the remaining...
outstanding technical and business issues.
1. ...However, the Alberta Land Surveyors’ Association still feels strongly that there should be a fee scale based on the number of lots created or titles affected. From a business point of view, this approach would be much more palatable to both the members and the clients.
2. ...The Association recommends that Spatial Data Warehouse consider an annual subscription fee for the right to use the data on behalf of the surveyors’ clients. It was felt that such a process would be efficient for both the Association’s membership and Spatial Data Warehouse.
3. ...We feel that once SDW has integrated the CAD file into the mapping base, the CAD file should be destroyed. This would go a long way to alleviate any liability concerns that we might have.
4. ...It is felt that the current grandfathering provision is just too short. The Association would be prepared to accept a full one year grandfathering provision.
5. There is still a great deal of concern and confusion regarding the proposed amendment to the Surveys Act. ...As the Minister of Municipal Affairs has already circulated a request for comments regarding changes to the Land Titles Act, we feel that it would be appropriate to consult with land titles stakeholders regarding this proposed integration fee.
6. Council had expressed concern regarding the digital file becoming the plan of record. As this is a new venture for both the Alberta Land Surveyors, Registries and ALTALis, it is only natural to expect that there will be several hiccups and glitches along the way. Since no one knows what these glitches might be, the Alberta Land Surveyors’ Association recommends that it is in the public’s best interest that the hard copy remain the plan of record until everyone is familiar and comfortable with the digital plan submission process.

...As you can see, the membership has expressed a wide variety of concerns. In spite of the road show and the draft Policies and Procedures Manual, many questions and concerns remain. For this reason, we request a written response to our letter so that we may publish it in ALS News for the benefit of our members.

The Association is committed to working with all parties in order to reach a satisfactory compromise.
Alberta Registries wrote...

“December 4, 1998

Thank you for your letter of November 6, 1998, addressing outstanding Association concerns with the forthcoming move to digital submission of survey plans. Registries, Environmental Protection and Spatial Data Warehouse (SDW) were pleased to meet with you and your representatives on November 27, 1998 to exchange views on these issues, and following that meeting I am providing the following point by point form response to these concerns. We hope this information clarifies to the Association our position and the accommodations we have made to assist the survey community in making this transition. We appreciate Council’s endorsement of the digital submission concept and look forward to further resolution of remaining concerns, where possible.

Point 1 - Fee
(Charged on a Per Plan Basis)

SDW and AltaLIS have developed a cadastral mapping updating process that requires digital plans as input. The updating process then takes those plans and integrates them into the mapping and/or integrates the surrounding mapping with the plan—depending upon the individual situation. The effort required to update the mapping consists of the following types of activities:

- Receiving the digital files for integration into the mapping system and performing standard file management and tracking procedures;
- Performing a coordinate transformation on the incoming file (which could be in any coordinate system) to approximately locate the digital plan within the mapping fabric;
- Observing the general “fit” of the unadjusted plan with the mapping fabric;
- Interactively matching “common” points between the incoming plan and the existing mapping fabric. The number of common points varies and is dependant upon the nature of the incoming plan and of the surrounding mapping fabric (for example, it is possible to have more common points on a 5 lot subdivision than on a 50 lot subdivision—it is a matter of circumstance);
- Observing the residuals derived by comparing the two different representations of each common point;
- “Weighting” common points and establishing an “adjustment fence” in the surrounding mapping fabric—the shape and extent of this fence is based upon the residuals derived from the common points (a function of such things as the accuracy of the new plan and of the existing mapping fabric);
- Performing the adjustment and observing the result;
- Performing clean-up and post-processing activities.

None of the above activities is specifically related to the number of lots or titles on the incoming plan. The majority of effort is related to file processing, how well things fit and the number of common points. It is entirely possible that a plan with fewer lots could take significantly longer to integrate than a plan with more titles. In fact, the “fit” issue is more of a problem in rural cadastral (parcel) areas (where plans typically have fewer lots, may not be tied to control and the mapping is less accurate) than in urban cadastral (MISAM) areas (where plans typically have more lots, are tied to control and the mapping is more accurate).

The amount of the fee is set on a per plan basis because the process being used to integrate the plan into the mapping takes more or less the same amount of time regardless of the number of lots or titles in the new plan. Any deviation from this fee strategy would artificially complicate matters and, would constitute a significant departure from the principle that those who change the cadastral fabric in Alberta pay the cost associated with reflecting their change in the provincial cadastral mapping base. In response to this concern, Alberta Environmental Protection has undertaken to provide surveyors with a hand out document, indicating the purpose of the fee and the basis for the establishment of the fee, that can be provided to your clients.

Alberta Registries is investing in excess of $800,000 in new technology, so that it can provide enhanced, on-line services to surveyors and other customers. Given the level of investment and effort to provide this enhanced service, it is not possible to envision providing the information contained in Land Titles information bases at no charge. It is Registries’ opinion that the current pricing structure is extremely reasonable, (and there are no plans to change the fees, in spite of the heavy investment in technology), particularly when compared to other provinces such as British Columbia where, we understand, newly available digital survey plans are currently being sold for $11 per copy versus Registries’ $3.

Registries’ business case for implementation of the new online plan search and download facility is based upon the continued revenue from survey products and services as laid out in the current tariff of fees.

Point 2 - licensing

SDW does not own any of the mapping data—the people of Alberta own it and the copyright is with the Government of Alberta. SDW indicated it has not significantly altered the licensing from that which was in place for a number of years when the Government of Alberta (GOA) distributed the data (see below). Licensing agreements have never made it possible to “purchase data” for redistribution—users could only license data for specific uses. The only form of license that has ever been in place (and that is in place now) is an end user license. This is the form of license that has been entered into by all current SDW participants. This license allows users...
to use the data for their own internal purposes.

SDW changes to the original end user license include:
• Changing the name of the licensing agent to AltaLIS;
• Clarifying the original intent of the Government restricting re-distribution of data in its original and value-added forms;
• Adding flexibility to the license agreement so that an end user could share the data with one or more service suppliers (such as a surveyor, or other agencies that might utilize mapping products in providing a service to the end user) through an instrument called a “Written Undertaking” (this measure did not exist in the past).

Previous licensing agreement restricted end users from sharing the mapping data with their service suppliers.

Since April of 1998, AltaLIS has processed about 325 new end user license agreements. Licensees include engineering companies, developers, resource companies, pipeline companies, municipalities and surveyors. In the same period, about 900 transactions have taken place under those license agreements. To date, no requester of map data has refused to sign a license agreement. The legal department of a very large company became involved in reviewing the agreement, but the company signed the agreement as-is. There have been a handful of “problems” explaining the written undertaking concept but these were minor in nature. The staff at the AltaLIS order desk (403-716-3490) provides assistance to end users in establishing end user license agreements and in using the written undertaking mechanism in those agreements. Once an end user license has been established, the end user is free to purchase access to additional data on an as-required basis under the same license. Those involved in providing value added services to clients who have an end user license agreement can now simply obtain the necessary information required by the licensed client with a written undertaking, provide their value added service, and delivery the product to the client, without entering into individual agreements with SDW.

This would allow a company, such as a surveying firm, to provide value added services “over top of” any existing end user license. If such services require that the service supplier have access to the end user’s data, such access can be achieved by using the written undertaking mechanism. Redistribution of...
the data by an end user (including SDW participants and the Government) or one of its suppliers to any non-licensed third party is prohibited.

From an SDW/AltaLIS perspective, they see no significant problems with the current end user licensing arrangements. They do, however, have plans to expand the range of licensing options. SDW and AltaLIS are working (with advice of ALSA representatives and others) to expand licensing options. In developing new licensing arrangements, SDW indicates it must make every effort to ensure that such expansion takes place on a “level playing field basis” that will ensure that no participants of SDW, of AltaLIS, members of ALSA or anyone else have a significant advantage over others.

SDW has proposed to ALSA members at numerous meetings, a special form of licensing arrangement. The intent of this arrangement is to try to ease the burden of preparing and submitting digital plans. The proposal put forward by SDW is this: “SDW is prepared to allow free cadastral data access to ALSA members for the specific purpose of preparing digital plan submissions for Alberta Land Titles if such access will ease the burden of transitioning into digital plan submissions.”

This access would likely be arranged through an FTP mechanism and access setup charges may apply. SDW indicates it is not sure if this proposal would be of benefit to surveyors or not and has not heard back from any surveyors or the ALSA regarding this proposal. In response to one surveyor who asked if he could resell the data he might receive under this arrangement, SDW responded “no” as that would obviously introduce an unfair distribution advantage over other industry sectors, and thus violate the principle of a level playing field for all users. If, having reviewed the expanded licensing proposals, the Association believes there is benefit in the proposal outlined above, SDW is prepared to sit down with designated ALSA representatives to determine of a beneficial arrangement can be developed.

Point 3 - Retention of CAD File

Initially Registries had offered to retain the submitted CAD files for up to a year to provide the survey community time to decide whether they would like that file type distributed amongst them or to others. Based upon your noted concerns, this will no longer be considered. Registries will not retain the CAD file once registration has occurred and will ensure, through agreement with SDW, that all CAD files will be immediately deleted after updating of the province’s cadastral mapping fabric.

Point 4 - Plan Submission Grandfather Exemption

It appears that the scope of the grandfathering clause in the draft Policy and Procedures Manual for Digital Plan Submissions has not been understood by all. The clause already provides for the one year exemption requested by the Association, and by further extension, up to a maximum of three years with suitable justification. Further clarification of the clause specifics will be given in the final publication of the manual.

A request to consider moving the grandfather exemption date from January 1, 1999 to April 1999 to allow further time for certain surveyors to implement the new digital level structures, was reviewed by Registries. A delayed implementation of the grandfathering clause for only certain surveyors was not seen as fair. Based upon information provided by members of the Association, and a review of Registries’ plan receipt statistics, a delay of three months in the application of the grandfathering clause, involving in excess of 2,500 plans, would have a significant impact on Registries’ automation processes. Given the magnitude of this impact, Registries cannot see changing the grandfathering date, and would recommend that the survey community use the slower period in December to prepare for the level structure change so that surveys undertaken after January 1, 1999 can be produced to the required digital standard. It is understood that the development of new level templates is expected to take approximately one day, with a few days for CAD operators to become familiar with the new levels.

Point 5 - Changes to the Surveys Act

The Minister of Environmental Protection is responsible for the Surveys Act. Section 7 of the Surveys Act provides the Minister of Environmental Protection with authority for the creation and maintenance of a geographical positioning system and various provincial mapping systems. Section 5 directs the Director of Surveys to coordinate the establishment and maintenance of a geographical positioning system and a mapping system for Alberta. Section 1 defines the geographical positioning system and the mapping system. The Surveys Act has been the authority for the existing cadastral and other map series prepared by the government. The proposed fee is for the purpose of continuing the provision of provincial map sets, which, due to a provincial government policy change, is now being managed by SDW. The fee will be applied to the direct cost of integrating new plans of survey into the provincial cadastral mapping base. Both the geographic positioning system and the mapping system for the province will be maintained under this initiative.

Under an administrative agreement the Minister of Municipal Affairs, through the Land Titles office, will be authorized to collect this fee on behalf of the Minister of Environmental Protection.

The Land Titles Act has neither the authority to collect a fee for mapping purposes, nor any responsibility for the provision or maintenance of the provincial mapping system. Both departments have reviewed the legislative options for the cadastral integration fee and legal
counsel has advised that this fee must be included in the Surveys Act.

In 1994, the President of the Alberta Land Surveyors’ Association presented a position paper at a Database Maintenance Workshop, which was held in Red Deer on September 15th and 16th of that year. The position paper published in the September 1994 edition of ALS News, proposed an approach to the maintenance of a “Cadastral Data Base” which is remarkably similar to the basis for the SDW/AltaLIS operation, including a fee ($150) per plan to be collected at the time a plan of survey is registered at Land Titles, and for that fee to be used, perhaps by the private sector, for the collection and compilation of cadastral mapping data. That paper also proposed that the end users of mapping data be charged only data storage and distribution costs.

**Point 6 - Plan of Record**

In order to ensure that any problems with submission processes can be addressed before the cut over date, survey firms are encouraged to submit digital files as the second copy of plans for registration between January 1, 1999 and the anticipated June conversion to full digital submission. During that time period, the hard copy will continue to be the plan of record, and that copy will be scanned and saved in our digital plan database as the registered plan. Using the digital plans submitted during this period, Registries will be ensuring that the process of capturing the digital information is secure and reliable. As of the cut over date, the digital plan will become the plan of record, fixed as a TIFF file and saved on our digital plan database as the registered plan. Upon registration, the signature forms will also be scanned and filed along with the digital plan as part of the registration package.

**Other General Comments in Response to Individual Surveyor Comments**

The impact of digital submissions on the differing accuracy standards between urban and rural surveys and mapping.

No changes are proposed to be made to current standards and practices used by surveyors in doing urban and rural surveys or the standards and accuracy differences between the MISAM and parcel mapping fabric...

The government’s commitment to search online and assurance that all plans will be included in the graphical search.

Registries’ current schedule is to have all 223,000 plans registered in the province, scanned and online via the internet by March 31, 1999. This is a full year ahead of the original schedule. There are some plans that may not be graphically searchable at that time (e.g. monument plans) because they are not referenced in the cadastral mapping fabric today. They will still be available though, using the online (text based) legal description search. A program will be put in place to deal with these additions to the mapping fabric as well as converting metes and bounds parcel descriptions over an extended period of time. None of the traditional forms of data access will be discontinued until a stable digital environment is fully established.
The perceived benefits of the data for some surveyors and their clients.

While for some surveyors there will be a one time cost to redefine their CAD mapping level structures, the new digital services delivered direct to the surveyors’ offices via the internet will provide on an ongoing basis, rapid access to Registries’ survey data, in either digital or hard copy formats. The availability of digital cadastral map context, as well as digital plans of survey should significantly reduce the drafting effort by surveyors to prepare new plans of survey. A number of surveyors who attended the five information sessions across the province have spoken to the benefits of this new service.

Some members have questioned what will happen if SDW’s forecasts and financial projections are not met.

SDW has indicated that, as with any business enterprise, there is always a risk that a business model or projections may be either inaccurate or that unforeseen industry changes take place. It is generally acknowledged in the industry, and validated by the ALSA’s own 1994 analysis, that the SDW business model is reasonably sound and supported by not only the government, but the five major utility companies as well. The greatest threat to the SDW plan at this point, is delay in moving forward with digital plan submissions and the associated plan integration fee. SDW has taken on responsibility for the maintenance, updating and enhancement of the provincial map series, most notably the cadastral map base, and delays in receipt of digital plans leads to additional, unplanned for costs for the conversion of hard copy plans to a digital format that facilitates integration into the provincial map fabric. The integration fee is also a critical aspect of the SDW business plan in that it represents the make-up funding which, by government policy, is no longer provided from the taxes levied upon all Albertans, but is the responsibility of those who utilize the land subdivision and registration processes for personal benefit. In so doing, they also change the cadastral fabric of the province, necessitating an associated change to that information.

I look forward to the challenges of the dynamic environment into which we are entering, and to the opportunities it provides for Registries, the surveying community and the Province of Alberta to move forward and improve the coordination of service delivery on several fronts.”

RAE RUNGE
EXECUTIVE DIRECTOR
Do you know the difference between a surveyor’s certificate and a Real Property Report? And what exactly is Title Insurance?

A Real Property Report (RPR) is a document that shows in a diagram the location of buildings, sheds, decks, driveways and any improvements on your property. This document was formerly referred to as a surveyor’s certificate, but in 1987 it was revamped and named a Real Property Report.

“The surveyor’s certificate was designed in the post-war era when mortgage companies wanted a document showing that the house they were insuring was actually on the lot,” explained Bob Wallace of Global Surveys. “But the surveyor’s certificate only showed the house and one of the other features such as a garage, deck or retaining wall.”

“In order to be absolutely sure that the house you are buying or selling complies with the City of Calgary bylaws, you have to have a Real Property Report. Your surveyor’s certificate might be good, but it only shows the house and only indicates that the house itself is good,” he added.

A Real Property Report, prepared by a professional surveyor, is a snapshot in time and enables the purchaser of land to know exactly what he is purchasing. Once an RPR is prepared, it can be taken by the landowner to the municipality to determine whether the improvements to the property meet all the local by-law requirements. The municipality reviews the RPR and then issues a compliance certificate indicating that the property does indeed meet municipal land-use requirements.

Wallace, a recent guest on The Real Estate Show, talked with host Iris Talbot, about Real Property Reports and common problems he encounters. “Most of the problems we see are people building fences into the lane, building a retaining wall on city property, or building a deck too close to the back property line. Most people are probably not aware that if their deck is over two feet high, it has to be two feet from the property lines and twenty feet from the back property line,” stated Wallace.

“A lot of people think that their property extends to the sidewalk or curb, and that’s not the case. The City of Calgary owns the road plus the boulevard. In various parts of Calgary, your property line may be back anywhere from one foot to thirteen feet from the sidewalk.”

“In Canada, we have the Torrens system of land registration which is a very clean, thorough and accurate system. Any and all encumbrances against a property are shown on the title and all titles are covered by a title assurance fund,” he explained.

“Title insurance must be purchased each time the owner of a property changes, whereas a RPR can be passed on to a new landowner for no charge if there haven’t been any problems made to the property,” stated Wallace.

“Once you get a RPR, any problems associated with that property are solved prior to the person buying the property, but if you don’t get a RPR any problem will be transferred to the new owner.”

If a fence or retaining wall has been built on city property, the City of Calgary will insist upon an encroachment agreement or some other form of compensation, or removal of the improvement. The vendor or purchaser may be liable for any problems uncovered.

When asked about title insurance, Wallace replied, “title insurance originated in the United States where the land registration system is different from Canada’s. A lot of their titles and deeds date back to the 1600s and there are a variety of problems associated with property titles. There isn’t a central registry for land titles. When you buy a property in United States you buy title insurance so that if there are any problems, the insurance covers them.

“In Canada, we have the Torrens system of land registration which is a very clean, thorough and accurate system. Any and all encumbrances against a property are shown on the title and all titles are covered by a title assurance fund,” he explained.

“Title insurance must be purchased each time the owner of a property changes, whereas a RPR can be passed on to a new landowner for no charge if there haven’t been any changes made to the property,” stated Wallace.

“Once you get a RPR, any problems associated with that property are solved prior to the person buying the property, but if you don’t get a RPR any problem will be transferred to the new owner.”

Editor’s Note:
The Real Estate Show airs on 1060 AM (Calgary) every Saturday at 11 a.m. The above article recaps key content from the show that aired on August 15, 1998. The live phone-in radio show features real estate issues of interest to both buyers and sellers alike, with a special feature each week for first-time home buyers.
All surveyors are familiar with and usually have their own interpretation of the rights conferred by Section 16 of the Surveys Act.

(4) If the land entered on is not expropriated, no action lies against the expropriating authority for damage occasioned by it in the exercise of a power given by this section unless notice in writing signed by the claimant is given to the expropriating authority who exercised the power within 6 months after notice was given to the claimant pursuant to subsection (1).

(5) The provisions of this section for notice and compensation apply notwithstanding that the authorizing Act makes express provision with respect to the subject matter of this section.

65 If any resistance or opposition is made or is threatened to be made by any person to the expropriating authority, or to any authorized person acting for it, in exercising its rights in or over, or to enter on and take possession of, the land, the court may on application by originating notice issue a writ of possession or any other order that may be necessary to enable the expropriating authority to exercise those rights.

All surveyors are familiar with and usually have their own interpretation of the rights conferred by Section 16 of the Surveys Act. The membership may not be as familiar with the other two sections and, although they may look similar, there are substantive differences from the Section 16 wording.
The substantive differences when compared to Section 16 are:

- No requirement for the land surveyor to be present.
- Legislation covers more activities than surveying.
- Requires a reasonable attempt to give notice before entering onto the land.
- Provides for an application to the courts by way of originating motion for an order or writ to exercise right of entry if such entry is refused.

The inclusion of a right to survey in those other two Acts leads me to believe that Section 16 of the Surveys Act is not to be used for activities that are defined in these Acts.

It is probably in order for surveyors to review these pieces of legislation, adopt a policy that combines the aspects of the legislation that gives the greatest recognition to the rights of the owner and occupant of the land. It will be very important to involve your field personnel in the development of your right of entry policy and it will help to ensure their compliance with the policy. The policy should also include provision for the timely assessment and payment of damages resulting from our activities. As member of a professional association we are bound by a code of ethics and item 1 of this code requires us to have due diligence for the rights of all in the performance of our duties.

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Coming Soon To A Practice Near You

Phase Two of the Systematic Practice Review will be up and running by January 1999. It will reflect input from the membership through comments made to Council as well as comments made by the membership during Phase One of the SPR program. In addition, the evaluation of Phase One conducted by the Practice Review Board has been used to adjust the review process. We expect that the process is now improved to better address member concerns and our Association’s needs.

During Phase One, 171 initial reviews were presented to the Practice Review Board for consideration and, to date, 38 follow up reviews were required for various reasons. From the 38 follow up reviews, three second follow up reviews were conducted. Supplementary reviews were conducted on six surveyors who were initially missed because of moving from one firm to another. It is the Board’s belief and expectation that Phase Two of the Systematic Practice Review program will result in far fewer follow up reviews.

Changes to the SPR process will be apparent from the start of your next review. For instance, your new SPR report will include a numerical rating for each product reviewed and an overall rating for each practice, as well as the average rating for all practices reviewed to date in Phase Two. Your review will still include a sampling of your products and field inspections will still be carried out. However, the Phase Two process will emphasize the commitments and undertakings that we have all addressed in Phase One. The Board considers these commitments and undertakings to be a serious matter as they are an example of a practitioner’s professional responsibility.

In Phase Two, you will be asked questions about changes that you may have made to your practice since Phase One. You will be asked questions about any new technologies and management systems that you have introduced since your initial review. In an effort to streamline the review, less emphasis will be placed on gathering general information about your practice. One of the shortcomings identified during Phase One was that the comments provided for each product reviewed tended to be repetitive. This will be addressed in Phase Two by consolidating comments that are general to the products reviewed and by placing emphasis on more serious deficiencies. The SPR staff is developing a weighting system, based on current survey standards, that will be used to focus attention on areas of serious concern.

Council has also given the SPR staff the task of increasing the educational emphasis of the SPR program. They are presently working with the Professional Development Committee on a revised Getting It Right seminar. An evidence assessment seminar is being considered. The field staff seminars formerly offered by SPR staff will be reintroduced in some form. Lastly, a regular education-oriented article in the ALS News is also being considered. It is hoped this feature will serve to make the membership aware of the more common problems that surveyors are experiencing. These articles will probably take the form of case studies and offer advice and examples with respect to procedures for solving or mitigating the problems illustrated. The Practice Review Board and staff will continue to monitor trends and identify common problems that arise through Phase Two and will liaise with the Professional Development Committee and Council to develop educational solutions.

Each practitioner will have their own feelings regarding Systematic Practice Review and its importance to our profession. From my own experience on the Practice Review Board, I would volunteer that there are three main categories of membership response to the SPR process.

The first category of response demonstrated is by those that use the SPR process as a tool to fine-tune a good practice and augment their quality control. I would suggest that a good number of our membership falls into this category.

The second category of response is by those who, acknowledging the deficiencies identified in their review, use the SPR process as an educational tool. This group appears to readily grasp the comments, information and suggestions made through their review, and uses the feedback as a constructive tool to assist with the improvement of their practice. Indications are that many practitioners in this category will be ‘promoted’ to the first category in Phase Two.

A third category of response is by those who appear to have a negative outlook towards the SPR process. Their previous experience and interpretation of professionalism controls their practice, and the SPR process does not, in their opinion, add value to their practice or to the profession. I would suggest that a minority of our membership fall into this category.

Regardless of how you may personally view the SPR process, rest assured that it is and always has been the Practice Review Board’s goal to assist with membership education. However, to achieve this goal, we as practitioners must have an open mind, a desire to improve, and the ability to recognize that improvement is necessary.
Digital Data Sources

A part of the mandate of the Professional Development Committee of the ALSA is to develop courses or seminars for land surveyors, articled pupils, and technical staff. At the August meeting of the PDC, the responses to the Professional Development Program Questionnaire collected at the AGM last April in Calgary, were reviewed. One category the respondents showed significant interest in is the subject of Digital Data Sources.

With the rapid growth of the personal computer and software industry in the last fifteen years, the sources of digital information have also expanded rapidly. The surveying and mapping professions have been quick to adapt to the changing technology and develop their own software applications and information databases.

We are all aware of the parcel mapping and MISAM programs compiled by the provincial government. Geomatics Canada has developed digital reference plans and a Survey Records Information System database. The ALSA has a Digital Plan Submissions working group, which is involved with providing input to Alberta Registries, Environmental Protection, and SDW regarding the registration of digital plans of survey. The Director of Surveys Branch is now providing wellsite traverse plans on compact disk through the Data Distribution Department. Survey control data is available in digital format from both the provincial and federal governments. Canadian Active Control System and DGPS data are available from both government agencies and private sector companies. There are numerous companies providing resource and remote sensing data that can be obtained in digital format. With the development of high baud rate modems and the internet, accessing digital data has become much faster and easier.

Bill Lovse and Fred Cheng of the PDC have been busy organizing a Digital Data Sources for Land Surveyors Seminar with a preliminary speakers list drawn from both government and private sector areas. The final details and location are still being worked out, but the seminar is tentatively scheduled for early March 1999. When the seminar is finalized, details will be included with an ALSA mailout to the membership, and posted on the association’s website.

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Findings and Order of the Discipline Committee

June 3, 1998

In the matter of hearing of the Discipline Committee of the Alberta Land Surveyors’ Association pursuant to the Land Surveyors Act (SA 1981, Chapter L-4.1) concerning the conduct of Mr. Barry Fleece, A.L.S. and Geodesic Surveys Ltd. held in Edmonton, Alberta on June 3, 1998, the Discipline Committee hereby makes its findings and order.

Allegations:
The hearing addressed the following allegations:
1. Insufficient evidence shown to establish quarter section lines as represented on wellsite survey plans 7-35-79-12-W6M (2 plans), 10-35-79-12-W6M and 6-2-80-12-W6M.
2. Signed a certification that the survey was performed in accordance with the provisions of the Manual of Standard Practice, although sections 5.1 and 5.2 of Part D, may not have been followed.

Findings of Fact:
1. Barry Fleece A.L.S. has been an Alberta Land Surveyor since 1978. At all times referred to in these findings he was registered as an Alberta Land Surveyor with the Alberta Land Surveyors’ Association.
2. Geodesic Surveys Ltd. is a surveyors corporation which at all times referred to in these findings was registered with the Alberta Land Surveyors’ Association.
4. When conducting the survey for wellsite KMG ET AL POCOUPE 7-35-79-12 Mr. Fleece did not run the East-West quarter line in section 35 and did not look for the E1/4 of section 34. Mr. Fleece re-established the position of the E1/4 of section 35 then estimated the location of the East-West quarter line from township plan data. Mr. Fleece had no documentation to confirm the accuracy of the township plan data. As the wellsite and access road are intended to be coincident with the quarter line this is in contravention with the Manual of Good Practice (dated 94-06-30 section 11.2) which states “Where the boundaries of a wellsite or related facility terminate on, are coincident with or purport to define a property boundary, the said boundary should be surveyed in accordance with the Surveys Act.”
5. The pipeline right-of-way (registered plan 912 2833) surveyed by Mr. Fleece located and tied in the monument at the E1/4 of section 34.
6. When conducting the survey for wellsite KMG BLUESKY POCOUPE 7-35-79-12 Mr. Fleece did not run the East-West quarter line in section 35. As the wellsite is intended to be coincident with the quarter line this is in contravention with the Manual of Good Practice (dated 94-06-30 section 11.2) which states “Where the boundaries of a wellsite or related facility purport to define a property boundary, the said boundary shall be defined in accordance with the Surveys Act.”
7. When conducting the survey for wellsite KMCL et al Pouce COUPE 6-2-80-12 Mr. Fleece did not run the North-South quarter line in section 2 and did not look for the N1/4 of section 2. As the wellsite and access road are intended to be coincident with the quarter line this is in contravention with the Manual of Good Practice (dated 94-06-30 section 11.2) which states “Where the boundaries of a wellsite or related facility terminate on, are coincident with or purport to define a property boundary, the said boundary should be surveyed in accordance with the Surveys Act.”
8. When conducting the survey for wellsite 10-35-79-12 Mr. Fleece did not run the East-West quarter line in section 35. As the wellsite is intended to be coincident with the quarter line this is in contravention with the Manual of Good Practice (dated 96-04-27 part D, section 5.2) which states “Where the boundaries of a wellsite or related facility purport to define a property boundary, the said boundary shall be defined in accordance with the Surveys Act.”
9. When Mr. Fleece conducted the pipeline right-of-way survey (registered plan 912 2833) he did not run the East-West quarter line in section 35, nor did he make sufficient ties to the existing wellsite survey KMG ET AL POCOUPE 7-35-79-12 to enable the calculation of the said ¼ line.
10. Wellsite plan 10-35-79-12 shows the survey originated from two found iron posts on registered plan 912 2833. The said posts are located in LSD 7 of section 35.

11. The introduction to the Manual of Standard Practice states “Where full compliance is not possible because of local conditions, conflicting requirements of other authorities or other circumstances, the onus is on the Alberta Land Surveyor to be able to defend noncompliance.”

**Findings of the Hearing:**

**Allegation 1**
The Discipline Committee finds Barry Fleece A.L.S. and Geodesic Surveys Ltd. guilty of unskilled practice.

**Allegation 2**
The Discipline Committee finds Barry Fleece A.L.S. and Geodesic Surveys Ltd. not guilty of unskilled practice or unprofessional conduct.

**Reasons for the Findings:**

**Allegation 1**
1. Barry Fleece A.L.S. displayed a lack of judgement and conducted the said wellsites surveys in a manner that was not in the best interest of his client or the public.
2. When conducting the said wellsites surveys Barry Fleece A.L.S. did not establish the quarter lines in accordance with the Manual of Good Practice (dated 88-07-07 section 11.2 and dated 94-06-30 section 11.2) and the Manual of Standard Practice (dated 96-04-27 part D, section 5.2).
4. Barry Fleece A.L.S. did not fulfill his professional responsibility to ensure the correctness of his survey of a property boundary.

**Allegation 2**
1. Due to existing terrain conditions Barry Fleece A.L.S. felt he had good reason to conduct the wellsites 10-35 79-12 survey in a manner that did not require compliance with the Manual of Standard Practice (dated 96-04-27 part D, sections 5.1 and 5.2).
2. Mr. Fleece felt the introduction to the manual gave him sufficient freedom to apply his professional judgement and conduct the survey as he felt appropriate. Although the Discipline Tribunal did not agree with Mr. Fleece’s judgement, we believe he signed the certification in good faith.

**The Order:**
In consideration of these findings, the Discipline Committee hereby orders that:
1. Mr. Fleece be ordered to pay the cost of the hearing.
2. Mr. Fleece be sent a letter of reprimand.
3. These findings, order and letter of reprimand be published in the ALS News.

**Letter of Reprimand to Mr. Barry Fleece, A.L.S.**
You have been found guilty of unskilled practice of surveying with regards to the establishment of quarter sections lines as represented on wellsites survey plans 7-35-79-12-W6M (2 plans), 10-35-79-12-W6M and 6-2-80-12-W6M. The Manual of Good Practice (dated 88-07-07 section 11.2 and dated 94-06-30 section 11.2) states “…where the boundaries of a wellsites or related facility purport to define a property boundary, the said boundary shall be defined in accordance with the Surveys Act.” You did not locate the required monuments to establish the position of the quarter section lines and were therefore in contravention of the Manual when conducting the said wellsites surveys.

As an Alberta Land Surveyor it is your responsibility to clearly understand the intent of the Manual of Standard Practice and to conduct your practice of surveying in accordance with those accepted standards contained within the Manual. You must continually exercise good professional judgement and under no circumstances allow project costs to affect your professional ethics. The Committee recommends that you review the Manual of Standard Practice to ensure you clearly understand the intent of the Manual and that you are conversant with those sections relevant to the areas in which you practice.

DISCIPLINE COMMITTEE OF THE ALBERTA LAND SURVEYORS’ ASSOCIATION OCTOBER 27, 1998

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Several reader inquiries have prompted us to return to a topic that we touched on several years ago: prisms and prism offsets. That target that you use for everyday surveying work seems to be a never-ending source of frustration, confusion, and even error. First, why an offset? Well, let’s consider the geometry of your survey prism or retro-reflector.

Prism offset is affected by the distance between the prism face and the center of the mounting bolt, the distance between the front face of the prism and the vertex or tip of the prism, and the refractive index of the glass used to make the prism. In fact, knowing these, one can calculate the prism offset. Multiply the distance from the front face of the prism to the vertex of the prism by the refractive index of the glass, typically 1.509 to 1.57, then subtract the distance from the front face of the prism to the center of the mounting bolt. The only unknown in the equation is the exact refractive index of the glass used to make a particular manufacturer’s prism.

So—why not make all prisms have a zero offset? Well, you probably know that 0mm offset prisms are commonly available. As you can see from the illustration, that the light travels into and out of the prism adds length to the distance measured. If a zero offset is desired, the prism must be attached to the instrument side of the prism mount thereby shortening the measured distance. If a prism with a 0mm offset is measured with a large angle of incidence between it and the instrument, the distance will be incorrect. This happens because the prism offset changes as it is rotated around the mounting point. Also, as the angle of incidence increases, signal strength decreases, shortening the effective range. A prism with a 0mm offset can also be unbalanced and unwieldy. As a result, many of the prisms available today have a -30mm offset, others are -40mm or somewhere close to this. Special prisms are manufactured with an offset that places, the apparent center of the prism over the mounting point to help eliminate accuracy problems when the prism face is not perpendicular to the line between the prism and EDM.

OK, you’re saying something along the lines of, “well, I know the prisms in the truck were marked -30mm by my instrument dealer, but what about that old triple in the supply shed?” How am I going to figure out what offset it has? Can I use it with the rest of my glass?” Well, you wouldn’t want to just put it out there with the rest of your prisms and take a chance that the offset is going to match. Why? The difference between 0 offset glass and -30mm is about a tenth, unacceptable in even the sloppiest surveys. Even if it is the odd Wild or Zeiss glass that’s only a few millimeters different, you introduce a small constant error into your observations. If your field procedures allow this error to accumulate, you again have problems.

So now you’ve got a couple of choices on figuring out what that odd prism’s offset is. You can measure the prism and prism can using the procedure above and calculate an offset if the prism assembly can be disassembled. You can also simply compare the distances measured with the prism in question to distances measured to a “known” good prism. It’s a good idea to measure in millimeters and keep in mind the accuracy capability of the EDM (+/-3mm, +/-1mm). Following is a list of some of the common manufacturer’s offsets.

- Hewlett-Packard: -28mm
- AGA: 0mm
- Sokkia/Lietz and Eclipse: 0mm, -30mm, -40mm
- Retro Ray (Lewis & Lewis/Lietz) -30mm, -40mm
- K & E: -30mm, -40mm
- Precision International: -40mm
- Kern: -70
- Topcon: 0mm, -30mm, -35mm, -40mm
- Chicago Steel Tape: 0mm, -30mm, -34mm, -49mm
- Omni Optical: 0mm, -30mm, -34mm, -40mm
- Wild: -34

In checking your prisms you’ll likely find that there is some variation among them, even prisms that should have the same offset. This is due to manufacturing tolerances and the abuse seen in the field. You may also wonder about scratched and chipped prisms, the ones that have hit the ground one too many times. Any scratches and chips reduce the range that your EDM will be able to measure to that prism. Chips in the prism can also affect the distance measured through the prism, changing its apparent offset. As a rule, small chips aren’t a problem, larger ones are.

We hope this clears up some of the mystery about prism offsets. Checking and matching your prism offsets can go a long way toward improving your survey accuracy.

As always we welcome comments, inquiries and future article topics for The Technical Side. Feel free to contact us at The Technical Side using any of the following methods.

By mail: The Technical Side, 1562 Linda Way, Sparks, NV 89431; by fax: (702)359-6678; by email: ccothrun@ingenuityinc.com or our website: http://www.ingenuityinc.com.

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Insurance

LIABILITY INSURANCE—Relief from Forfeiture

Real estate company was not entitled to relief from forfeiture in circumstances where it had failed, as required, to give insurer notice of a potential claim within the period of the coverage provided.

Insurer appealed from a decision in which real estate company was granted a declaration requiring insurer to defend and indemnify it in a lawsuit brought by plaintiff. On July 22, 1991, plaintiff agreed to purchase a certain property which was listed by real estate company. Following the closing of the transaction, plaintiff discovered, contrary to her expectations, that the well on the property was not capable of providing a safe and sufficient supply of water for household use. On December 7, 1993, real estate company maintained errors and omissions insurance with insurer under a “claims-made and reported” policy. On January 26, 1994, real estate company provided insurer with notice of plaintiff’s claim. However, the policy had lapsed on December 31, 1993. Insurer argued that real estate company had disentitled itself to coverage by failing to notify it in writing of the potential claim during the policy period. In addition, insurer submitted that real estate company was not entitled to relief from forfeiture because company’s breach constituted non-compliance with a condition precedent to coverage and because company had failed to meet the conditions necessary to invoke such relief. The motions judge disagreed with the position of insurer. He found that relief from forfeiture was available under s. 129 of the Insurance Act (Ont.).

Held: Appeal allowed. Real estate company could not avail itself of Section 129 of the Act. It had failed to meet a time requirement under the policy and thus there was non-compliance, rather than imperfect compliance, with a condition precedent to coverage. Section 98 of the Courts of Justice Act (Ont.) did not permit real estate company to obtain relief from forfeiture either.


REPRINTED FROM THE OCTOBER 23, 1998 EDITION OF THE LAWYERS WEEKLY WITH PERMISSION FROM THE AUTHOR
At this festive time of the year, we would like to single out and thank the geomatics firms that have members of ASSMT on their team. I am sure you would be impressed by the diversity of the firms listed below. Our members are confident to your clients.

By the way, does anyone out there know anything about our missing trophy that was donated by Wolley-Dod and MacCrimmon Surveys? It was last won by the northern team. The Orthosop will be single this festive time of the year.

For more details in upcoming issues of ALS News. We haven’t held a similar event since our early days in 1971-72. By the way, does anyone out there know anything about our missing trophy that was donated by Wolley-Dod and MacCrimmon Surveys? It was last won by the northern team. Will the “King of Technicians/Technologists” be one of your staff?

Safety certification programs were held in Edmonton and Calgary in the fall. In Edmonton, the students were Teresa DeMarco, Steve Broadbelt, David Maltbly, and Rodger Oxtoby from Hamilton & Olsen Surveys Ltd.; Darren Porter from Universal Surveys Ltd.; Tyson Astle and Mike Arko of Can-Am Surveys Ltd., and Bernie Brotschi of Natural Resources Canada. In Calgary, the students of the technician program at Bow Valley College took the course. We congratulate all those concerned.

The Calgary group held a Christmas Regional meeting at the Danish Canadian Club on December 15, 1998 sponsored by Am-Tech Canada, Precision Systems Inc. Akrim Din, Supervisor, Survey Department, Land Titles Office spoke on the electronic lodgement of plans which will come into effect there in 1999.

May you all have a safe and happy Christmas and a wonderful and abundant New Year in 1999. This is your last chance this century to be certified!

Spring 1999 Locator Training Seminar Schedule Announced

March 2, 1999

Radiodetection Canada has finalized the spring 1999 Advanced Underground Pipe and Cable Locating Seminar schedule. This widely acclaimed training presentation covers the basic principles involved in locating underground facilities and techniques for solving difficult locate problems. The presentation is generic in nature and does not promote specific manufacturers of models.

For more information please contact:
Radiodetection Canada
1-800-665-7953 for the name of the organizer in your area.
An Effective Way to Hire the People You Need

Every year, the four western associations attend an advisory committee meeting at the University of Calgary to ensure that the Geomatics Engineering Department is meeting industry’s needs. The Advisory Committee meeting is an opportunity to listen to students’ concerns and offer feedback. This year, the University of Calgary told the associations that the internship program has been a tremendous success in other engineering departments and encouraged land surveyors to consider the program when hiring employees.

The University of Calgary’s Engineering Internship Program provides an opportunity for you to hire skilled, motivated, career-oriented students. Students in an internship program spend twelve to sixteen consecutive months (three or four work terms) in paid full-time employment between their third and fourth year of academic study.

Benefits to Employers

Internship students are highly motivated and enthusiastic employees who take pride in their work in order to learn, be productive and make a contribution. They are quite advanced in their education, having completed their third year of engineering studies; consequently, they often perform at a level expected from junior engineers. In addition, they may bring a new and fresh perspective to a work group; this has frequently catalyzed an improved approach to a problem or a project for the whole team.

Internship is also an effective means of evaluating future employees before making long-term hiring commitments. In a competitive hiring market, internship provides an opportunity to see and attract qualified students before they graduate and are seen by your competitors.

Finally, internship provides many organizations an opportunity to provide development opportunities for their junior professional employees by naming them as mentors or supervisors to internship students. Taking on a formal role as a mentor, with responsibility for working toward explicit development objectives for a student, will tend to reinforce the growth and development of the mentor as well.

Work Term Sequence

To receive credit, students are required to complete at least twelve months of internship in a sixteen-month window between third and fourth years. Most students are available in May, for eight, twelve or sixteen month placements. A smaller number are available in September for twelve month assignments, or in January for eight months.

Engineering Internship Jobs

Students work in a variety of positions in organizations throughout the private and public sectors. The internship program is a strategy of the Faculty of Engineering to develop a superior graduate engineer. In addition to technical competence, which comes from experience in the application of engineering principles and the development of professional judgement, the superior graduate is expected to grow and develop in a broad array of personal and interpersonal skills and attributes, business and process knowledge and skills. Jobs which provide these career-related learning opportunities under the supervision of professional engineers are the most suitable.

The Engineering Internship Office will assist you to develop a job description to meet your particular employment needs. Sample job descriptions, salary details, information on the specific academic programs, and students’ skills and experience are also available. A more detailed information package outlining the separate engineering departments is available from the Engineering Internship Office.

Salaries

Employers determine the salaries paid to students within their own organizations’ wage structures. Students can be hired in a temporary full time position, or on contract, and paid a salary or hourly wages.

Key Recruiting Dates

<table>
<thead>
<tr>
<th>Job Descriptions Advertised</th>
<th>Interview Dates</th>
<th>Work Term Starts</th>
</tr>
</thead>
<tbody>
<tr>
<td>mid-January to April</td>
<td>February to April</td>
<td>May (8, 12 or 16 months)</td>
</tr>
<tr>
<td>mid-May to August</td>
<td>June to August</td>
<td>September (12 months)</td>
</tr>
<tr>
<td>mid-September to December</td>
<td>October to December</td>
<td>January (8 months)</td>
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</tbody>
</table>
Expectations of the Employer

Employers are expected to discuss objectives, and performance expectations with the student. They monitor the performance of the student and provide on-going feedback. To enhance performance, the employer is encouraged to name a mentor, other than the supervisor, for the student. A written performance assessment is discussed with the student and then submitted to the Engineering Internship Office every four months.

Students write a report every four months, which is submitted for marking to the University. The employer is expected to review and release the report. (If confidentiality is a concern, a confidentiality agreement may be arranged, or the employer may choose to mark the report according to the guidelines provided by the University.)

Awards and Honour List

To further recognize your efforts and dedication, the Engineering Internship Advisory Council has developed an award system for internship students. The Award of Merit will acknowledge the top student in each department, with each student receiving $1,000. Each department winner will be interviewed by the Awards Committee of the Advisory Council, one of whom is chosen for the Internship Award of Distinction.

The Engineering Internship Honour List will acknowledge students receiving a grade point average of 3.6 or higher, based on the students’ letter reports, comprehensive reports and the assessments from their industry supervisor.

Interested in Internship?
Contact the University of Calgary directly.
A surveyor turns detective when the sudden death of his instrumentman in the Colorado mountains looks suspicious.

J.H. Holloway Scholarship Foundation

March 1, 1997 — December 1, 1998

Donors have contributed up to $500 to the Foundation.

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Contratulations to
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and
Lesley Ewoniak
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