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ALS NEWS

Editor G.K. Allred
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Editorial Board A.D. Hosford, Chairman

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15, Fall Issue - September 15.
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Edmonton, Alberta T5L 4S6
Phone (403) 452-7662
On behalf of the Executive of the Association, I extend Season’s Greetings and Best Wishes for the coming year to all members and families.

Since last reporting, Jill and I, on your behalf, have attended the Land Surveyors Association of Washington AGM in Spokane; the Association of Nova Scotia Land Surveyors AGM in Halifax, and on the same trip, as your CCLS Director, I attended the CCLS Directors Meeting in Fredericton. I was also pleased that we were able to attend the Alberta Urban Municipalities Association convention in Red Deer which was attended by some 1200 people apparently representing nearly 100% of all urban municipalities in the Province. Our membership plays a major role in the responsibilities of these municipalities and I suggest that we foster more communication with this group.

I attended recently a Dedication Ceremony at the Edmonton Convention Centre. This Ceremony acknowledged the input from several prominent organizations in depicting graphically the contributions of those organizations in the development of Edmonton up to 1930. Denis Hosford and the Public Relations Group are to be commended for their efforts in displaying the activities of early surveyors in the development of the City of Edmonton and the Province. The display appears on the wall in Salon 8 of the Convention Centre which will be the meeting room for the 75th AGM.

Committee Members, Council Members and the Executive Committee have in recent months been extremely busy in drafting and presenting various briefs. These include “A Proposed Policy on the Procurement of Professional Surveying Services”, a brief to the Hon. Connie Osterman regarding the Condominium Property Amendment Act 1983; a brief to the Select Committee on the Occupational Health and Safety Act and; a brief to the Environment Council of Alberta on “Maintaining and Expanding the Agricultural Land Base in Alberta”. These briefs will be printed in Als News for the benefit of all members.

The Executive Committee has now received a response from the Bureau of Surveying and Mapping to the proposed procurement policy. Some of the principles in that policy were not acceptable to the Bureau resulting in further discussion with the Bureau at the time of writing.

Some members have expressed a concern to Council through the Consulting Practice Group, that current practices by the Department of Recreation and Parks and the City of Red Deer in administering their respective procurement policies are unacceptable. A letter was written to the City of Red Deer and a meeting held with the Department of Recreation and Parks to express Council’s concern as well. In both cases the Association has been invited to discuss the concerns further.

I am pleased to report that our Council Meeting of November 25 and 26 adopted a budget for 1983-84. This will be essentially a “balanced” budget; a budget which will maintain the current product of service to the members; and a budget which allows for a $10 reduction in annual fees for all practitioners. I personally feel this is a good budget for the times and commend Council on its decision.

Since the adoption of our “suggested” schedule of fees on October 15, 1983, reaction to the schedule from the public and our members has been mixed. Both positive and negative response has been received from the public. It would appear that there are two main reasons for the negative response: 1) the manner in which some members have communicated their rates to the client has left much to be desired, and 2) rates in some cases have significantly increased.

Justifying rates for professional service of any kind is difficult and complex at any time. The public may require a full explanation of all factors involved in the fee structure. To maintain the confidence of the public in our profession we must become proficient in our communication skills to accurately and professionally justify the rates. To merely quote a fee schedule to the client and say “I must charge this” is unprofessional.

Members have reacted to the schedule in different ways. Some members feel comfortable with the schedule as a guideline and express no difficulty in communicating their rates to the client. Other members have confused the schedule with a mandatory schedule and ask “is everybody else going to follow it?” Some members continue to use the guidelines as a competitive tool to obtain work.

While the whole question of fees for professional services is very complex, it might also be said it is very simple..........the services must be to acceptable standards, we must accept the risk and liability in providing the services..........therefore it is not unreasonable to expect “fair and just compensation” for providing these services.

Happy New Year!

R.A. Bassil, A.L.S.  
President

als news winter, 1984
ETHICS VS. BUSINESS

"There is honour and satisfaction in a job well done and a profession well practiced."

In these days of economic depravity, the issue of ethics in business and professional practice is receiving considerable public discussion. Whether this concern is a product of our present times or more an offshoot of the overheated economy of the late 1970s, is perhaps a side issue.

The main issue, however, is that professionals are not perceived as having the ethics that the public has come to expect. Two solicitors were recently suspended after defrauding their clients of millions of dollars, a Calgary physician was suspended for life for overbilling the health care system and the teaching profession has been under fire for the anti-Jewish teachings of an Eckville principal and mayor. As a result of some of these concerns, the universities are being asked to establish courses on professional ethics.

In the Alberta Land Surveyors' Association, topics on ethical considerations have been dealt with at virtually every one of the annual Professional Practice seminars. A brand new Code of Ethics was recently adopted after extensive debate at committee meetings and general meetings.

Is it merely fashionable for professional associations to talk ethics or is the foundation of a professional's standing in the community really based on a solid pillar of ethics in practice?

One of the first principles learned by surveying students deals with the requisites of a surveyor as paraphrased from the elementary textbook - David and Foote. "Traits of character are far more potent factors in the success of a surveyor than is mere technical knowledge or skill."

Like most persons in positions of trust, land surveyors must subscribe to an oath of office as well as a code of ethics. The Oath of Office recently adopted by the ALSA places a high degree of emphasis on phrases such as "without prejudice", "diligently, faithfully and to the best of my ability" and "conduct myself truly and with integrity." All of these phrases have a high degree of ethical connotation.

The land surveyor by the nature of his office must use his judgement and render a decision based solely on his findings. He must ensure that his information is reliable and sufficient to make those judgements. He must not be unduly influenced by his client or his client's interests. He must preserve in all his work the judicial mind and the impartial attitude of an arbiter. For after all, the land surveyor is a judge. The field is his courtroom.

Like the judiciary, the foundation of the practice of land surveying is based on an impeccable degree of honesty and integrity and an unimpeachable ethical standard.

The question is, will the land surveying profession stand up to the tests of an economic slump or will its members bend to the aggressive back-biting forces of a faltering economy? Will land surveyors be forced into reverse auction tactics of bureaucratic organizations that neither understand or adhere to ethical standards? Can land surveyors dig in their heels and insist that the standards of the profession be maintained or will they let the client dictate the standards and the price?

The question will be decided not by the profession, but by the members of the profession and it boils down to only one question - a question of ethics.
One of my favourite subjects to study is "BOUNDARIES" as they affect us in our chosen profession as Land Surveyors. I recall the first major problem I encountered with a boundary was when I was to run an access road north along the ¼ line from a highway in the south ¼ of Sec. 24-3-2-W2 to a well in LS 11. The road was to be adjacent to the ¼ line, on the west side and then to turn west to the drilling location. The southern part of Sec. 24 was partly in the Souris River Valley; however, we were able to find some trace of the old highway plan posts and using the copied calculated distances to the ¼ line ascertained the point where the ¼ line crossed the E/W road diversion. At the north end of the ¼ line we were able to find a post shown on a new highway widening survey. It was an elementary task to connect the two and continue with the survey, however, the road post near the N¼ Sec. 24 was some 50 feet east of a substantial fence. There was an equally substantial fence going north on the other side of the new highway.

To make a long story short, this evolved into one of our legal precedent setting cases referred to in Max Viminitz’s Book “Boundaries” and named FORSETH vs. CHAPPELL 1962. The land surveyor to whom I articulated testified as to where he thought the boundary was and I testified, as an articulated pupil, as to what was measured and check measured in the field. The court was unable to understand ties shown on other plans that corroborated the found iron post.

I feel the case was lost by Plaintiff FORSETH (owner of NW 24) when the 72 year old Mr. Chappell testified that at an age of 11 he had helped his father build a fence along the disputed boundary by standing on a mound at the ¼ corner. The brilliant lawyer for the defendant had Chappell very well rehearsed and he testified in a quiet voice and in a very convincing manner. The lawyer also showed the court other township plans surveyed by the same surveyor as the township in question with a monument shown displaced several links from a true 40 chains.

I personally doubt that Chappell had stood on the mound, however, the evidence was strong. As a young man, I lived across the road from an excellent set of road pits and iron post for 20 years before I left my father’s farm in Southern Alberta. I can never remember seeing the monument yet I must have passed it many times while doing my farm chores. I easily found the monument after gaining my commission as a Land Surveyor. Dr. Alex McEwan, C.L.S. stressed in his C.L.S. 1981 Survey Law course the weight of the mechanical re-establishment of lost corners. He stressed that a surveyor, when considering a boundary problem, should have every bit of useful information available to him and make his decisions after carefully weighing all the evidence.
NOTES ON 1983 SCHEDULE OF FEES

All Alberta Land Surveyors should be encouraged to charge at least the minimum schedule as published by our Association. In the past two years mortgage certificates have been performed at a price lower than the $100.00 minimum set out in the Saskatchewan Tariff for the year 1974. The value of the professional services provided by the land surveyor will only be appreciated when the price reflects the cost, responsibility and the service provided. It is fair to say that the hours spent and the professional responsibility assumed is greater for the surveyor than the lawyer, in a mortgage transaction. The surveyors fee will be half that of the lawyers with our new suggested minimum schedule of fees.

Lyle E. Ford, A.L.S.

HISTORY—BEST TEACHER

- A.G. Stewart worked from a basement in 1948 when they discovered oil in Alberta.
- C.B. Atkins worked from his home for years and the firm became Usher and Associates.
- Joe Doze retreated to a farm at Josephburg in the height of the dirty thirties depression.
- Alfred Driscoll was worth a million dollars on paper when the dollar was worth something during the land boom of 1914. When the Great War broke out, the boom burst and he was seen getting on the street car with his instrument and a bundle of pegs. He didn’t own a car at that time.
- So history is repeating itself as it always has.
- Sell the Lincoln Continentals, get out of the offices and go to work in the field. You won’t starve. Turnips aren’t so bad!

J. Arthur Hall, A.L.S.

BEWARE OF THE CRUISE

Some things that may appear as “all in a day’s work” to us may make interesting reading for others. Under our Framework (rural) survey control program we often have occasion to select survey control marker sites on private land. For such occasions we use a type of form letter in which we describe the program as well as the schedule for marker installation, photography, airborne ISS operation, etc.

At the conclusion of the letter we make the statement “I understand, grant permission, etc. etc.” below which the land owner places his signature. Demonstrating the extent to which nuclear arms and missile testing are in the public mind, one land owner recently added, just above his signature:

"Also, it is understood this project is in no way connected with nuclear missile testing."

Ernie Tessari, A.L.S.
Director, Survey Control Branch
Alberta Bureau of Surveying and Mapping
NEW MEMBERS

#544 GREEN, Stephen Campbell
Stephen was born in Calgary, Alberta in 1955. He graduated from high school in 1973 and went on to SAIT obtaining his diploma in Survey Technology in 1978. Stephen also obtained a B.Sc. in Survey Technology from the University of Calgary in 1982. He is the first U of C Surveying Engineering graduate to receive an ALS commission. Articles were served under C.H. Weir, A.L.S. and W.H. Jones, A.L.S. The topic of the technical report submitted as part of the qualifying examination was "Least-Squares Computations Using Given Transformations".

Stephen is also a member of the CIS, ASP and APEGGA (Engineer in Training). Stephen, his wife Janet and their 1½ year old son, Jeffrey reside in Calgary.

#545 MATTHYSSEN, John Joseph
Born in Toronto, Ontario in 1957. John graduated from high school in 1976 and then attended the University of Toronto and Erindale College receiving a B.Sc. in the 4 year Survey Science Program.

K.E. White, A.L.S. served as Principal from 1981 to 1983. John has been involved in cadastral, construction, and engineering surveys and has been with S.M. Loeppky and Associates since 1981. "Precise Monitoring of Structural Movement" was the topic of John's technical report submitted as part of the qualifying examination.

Skiing, racquet sports and carpentry are a few of his hobbies. John is married to Shannon and they reside in Calgary.

AACIP ANNOUNCES AWARD PROGRAM

The Alberta Association, Canadian Institute of Planners, has recently announced an Alberta Awards Program designed to recognize significant contributions to land use planning in Alberta. Three categories of the awards are Physical Design; Plans, Policy Documents, and Regulations; and General - Professional.

The awards being offered are not restricted to professional planners, but are open to applications from Land Surveyors, Architects, Landscape Architects and other professional and public groups interested in the advancement of planning.

Applications may be obtained from the Secretary, AACIP, P.O. Box 596, Edmonton, T5J 2K8. The deadline for applications is February 1, 1984.

SURVEYORS ON THE MOVE

W.D. Usher & Associates has announced a re-organization of the firm as follows:

Al Edwards will relinquish his interest in the firm during 1984, but will continue in a consultative role until his retirement in 1985.

Rob McCuaig will relinquish his interest in the firm effective December 31, 1983; will embark on an extensive vacation to Australia and the South Sea Islands, and on his return, will pursue a post graduate program toward his M.B.A.

Paul Allegood has joined Nortech Surveys in Calgary resulting in the closing of Coordinate Surveys Ltd. Calgary office.

Floyd Strochinski has joined the ranks of Can-Am Surveys in Edmonton.

Allan Neilson is enrolled as a full time student at the University of Calgary in Surveying Engineering.
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<tr>
<th>Date</th>
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<td>January 18-20</td>
<td>Comprehensive Planning - U of A Extension</td>
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<td>January 19</td>
<td>Cost Estimating for Construction - U of A Extension</td>
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<td>January 23-27</td>
<td>Short Course in Airphoto Interpretation - U of A Extension</td>
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<td>January 25</td>
<td>Writing Skills - U of A Extension</td>
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<td>January 30</td>
<td>Survey Calculations I - SAIT</td>
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<td>January 30</td>
<td>Survey Calculations II - SAIT</td>
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<td>January 30</td>
<td>Survey Field Work - SAIT</td>
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<td>February 2</td>
<td>Introductory Statistics - U of A Extension</td>
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<td>Contract Law and Construction Documents - U of A Extension</td>
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<td>February 3</td>
<td>Starting Your Own Business - U of A Extension</td>
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<td>February 7-10</td>
<td>Planning Commercial &amp; Industrial Areas - U of A Extension</td>
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<td>February 13</td>
<td>Technical Report Writing - U of A Extension</td>
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<td>February 18</td>
<td>Starting Your Own Business - Grant McEwan College</td>
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<td>February 20-24</td>
<td>12th Alberta Remote Sensing Course - U of A Extension</td>
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<td>February 21-22</td>
<td>Adjustment and Analysis of Survey Data - U of A Extension</td>
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<td>March 5-6</td>
<td>An Introduction to Small Towns - U of A Extension</td>
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<td>March 6</td>
<td>Writing Effective Reports - U of A Extension</td>
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<td>March 6-7</td>
<td>Adjustment and Analysis of Survey Data - U of C</td>
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<td>March 10</td>
<td>Survey Lab I - NAIT</td>
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<td>March 12-13</td>
<td>Computer Assisted Design - U of A Extension</td>
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<tr>
<td>May 17-18</td>
<td>Simple Field Methods - U of A Extension</td>
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**COUNCIL DECREASES MEMBERSHIP FEES**

Council of the ALSA in adopting the 1984 Association Budget was able to decrease the annual membership fees by $10 per member. In effecting this decrease Council however, was not able to reduce the annual fee for surveyors’ corporations and partnerships beyond the individual membership fee. A motion at the 1983 AGM had directed Council to reduce the corporate fees to $50 per firm. In examining the situation however, it was determined that to reduce the corporate fee would result in a corresponding increase in general membership fees of 30%.

Faced with this situation Council re-examined their existing policy regarding fees and concluded that the existing policy was sound and equitable. The existing policy establishes fees for all practitioners at the same level. It is based on the principle that all practitioners are granted their right to practice under the Land Surveyors Act and all benefit equally by the existence of the association. The amount of administrative time required to maintain individual memberships is not appreciably different from corporate membership.

In other budgetary matters Council adopted a budget which was only marginally different than the previous years budget with a 1% decrease in anticipated revenues and a similar increase in expenditures for an anticipated surplus of $3,350. With the exception of accounts for Council expenses, discipline and the annual meeting only nominal increases in expenditures were authorized. Cutbacks in public relations, car allowances and legal fees were made to offset these increases.

**SURVEYORS’ DIARY**

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<tr>
<td>February 3</td>
<td>WCBE meeting - Calgary</td>
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<td>February 10</td>
<td>Retirement party - H.H Krajewski, A.L.S.</td>
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<td>February 11</td>
<td>ALSA Council Meeting</td>
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<td>February 21-22</td>
<td>Adjustment and Analysis of Survey Data - U of A Extension</td>
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The Planning Group requests all surveyors interested in having a meeting with a Planning Commission to contact the Association in writing by February 10th, 1984. Please indicate which Commission(s) you would like to meet with. If there is sufficient response, meetings will be arranged.

**CHANGES TO THE OFFICIAL REGISTER**

The registration of the following members has been cancelled for non payment of fees:

- D.A. Duffy - non payment of 1983 annual fees
- T.J. Manning - non payment of 1983 annual fees and disciplinary costs
- J.B. Turnbull - non payment of 1983 annual fees
- A.G. Turnock - non payment of 1983 annual fees

G.K. Allred, Registrar

The planning Group requests all surveyors interested in having a meeting with a Planning Commission to contact the Association in writing by February 10th, 1984. Please indicate which Commission(s) you would like to meet with. If there is sufficient response, meetings will be arranged.
TWELFTH ALBERTA REMOTE SENSING COURSE
University of Alberta, Edmonton, Alberta
20 - 24 February, 1984
Conducted by the Alberta Remote Sensing Center
In Cooperation with
The Faculty of Extension, University of Alberta

The purpose of the course is to develop a practical expertise in using remote sensing in earth resource surveys and management.

The course is designed to instruct multidisciplinary users in the application, acquisition and interpretation of earth resources satellite - Landsat, and aircraft multiband data - photographic and non-photographic.

It will emphasize the practical uses of remote sensing and will utilize imagery interpretation exercises based on actual research projects under the guidance of the researchers involved.

Excellent instruction will be provided by Canadian scientists from many agencies across Canada actively engaged in remote sensing and Professor R.N. (Bob) Colwell of the University of California, one of the world's leading scientists in the field of remote sensing.

The course content will include: an introduction to remote sensing; historical development; basic matter and energy relationships; data acquisition - photographic and non-photographic sensors; the Canadian satellite and airborne remote sensing programs; techniques of manual and instrument aided image interpretation; use of digital satellite data; land use studies and classification; agricultural applications; geosciences and many more subjects.

Alterations may be made to the course content as new techniques applicable to Canada's natural resources develop.

The registration fee of $200.00 includes syllabus and course materials.

Registration is open to anyone from anywhere in order of receipt. Enrollment is limited to provide better instruction. Past courses have been oversubscribed so persons should plan early to attend. Those interested in attending the course should call the Alberta Remote Sensing Center at 403/427-2381.

COUNTY OF STRATHCONA DECLARED A SUBDIVISION APPROVING AUTHORITY

The County of Strathcona has been declared a subdivision approving authority pursuant to the Planning Act as of January 1, 1984. All inquiries should be directed to Mr. Brent Barnes, Planning Technician
Planning Development Office
Main Floor, County Administration Building
2001 Sherwood Drive
Sherwood Park, Alberta T8A 3W7
Phone: 464-8125 or 464-8127

SURVEY LAW TAPES

Tapes of the CIS Survey Law Course are available at the ALSA office to members and articulated pupils. Fourteen tapes constitute the entire set, each tape being a 90 minute cassette.

The following index gives the full description of the entire Survey Law Course:

1. The Canadian Legal System
   - nature and sources of law
   - function and limitations of law
   - constitutional basis of legislative and judicial authority
   - Common law and Civil law
   - Canadian court systems
   - using a law library
   - statutory interpretation
   - doctrines of precedent and stare decisis
   - case law study technique; ratio decidendi and obiter dicta

2. Evidence
   - classification of evidence
   - effect of evidence
   - burden of proof
   - presumptions
   - admissibility, relevance, conclusiveness
   - weighing evidence
   - survey records as evidence
   - selected case studies

3. Real Property Law
   - historical background to English land law
   - concepts of estates and tenures
   - legal & equitable interests in land
   - mortgages, leases, licenses
   - easements and rights of way
   - prescription & adverse possession
   - principles of land registration
   - conveyancing
   - selected case studies

4. Boundary Law
   - nature & classification of boundaries
   - creation of boundaries
   - water boundaries & riparian rights
   - erosion & accretion
   - boundaries & adverse possession
   - retracement of boundaries
   - conventional lines
   - boundary descriptions
   - dedication & acceptance of roads
   - selected case studies

5. Acts & Regulations
   These tapes can be loaned from the ALSA library. Due to the nature of the medium, loans will be for a maximum of 10 days and will require a $20 deposit. The tapes may also be used in the ALSA library, however since the ALSA does not own a cassette player, you must bring your own.
ALBERTA ARBITRATION & MEDIATION SOCIETY
SEeks ALBERTA LAND Surveyors AS Members

The Alberta Arbitration and Mediation Society was formed as a non-profit organization in 1982 to:
(a) provide a forum for the promotion, acquisition and dissemination of knowledge of mediation and arbitration procedures in the settlement of disputes;
(b) educate the public, business, professional, Government and municipal community in the process and scope of mediation and arbitration procedures and to gather and disseminate information for that purpose;
(c) institute, support and carry out any research, program or activity designed to promote an understanding of mediation and arbitration;
(d) provide assistance to persons wishing to use arbitration or mediation procedures including the establishment of a roster of persons who are suited to act as mediators or arbitrators;
(e) establish facilities and implement procedures for the conduct of mediation and arbitration proceedings.

After one year of operation, the Alberta Arbitration and Mediation Society has grown to become the largest organization of its kind in Canada. AAMS is a member affiliate of the Arbitration Institute of Canada and all Society members receive national membership with AIC.

Alberta Land Surveyors are welcomed, given arbitration procedures specific to the surveying profession. The Society is currently an extremely diverse group which is comprised of municipal representatives, engineers, lawyers, architects, planners, insurance representatives, labour representatives, commercial, construction and government representatives amongst others.

Members of the Society generally are interested in becoming independent arbitrators in disputes occurring in their field of interest or are persons requiring such services. The Society has established chapters in both Calgary and Edmonton.

For further information contact:
Alberta Arbitration and Mediation Society
313 Le Marchand Mansion
11523 - 100 Avenue
Edmonton, Alberta
T5K 0J8
Telephone: (403) 482-2379

It is interesting to note that the Arbitration Act (RSA 1980 c A-43) defines a “professional arbitrator” as “an arbitrator who is by profession a barrister, solicitor, architect, or Dominion Land Surveyor or Alberta Land Surveyor.” Why are no land surveyors members of the Alberta Arbitration and Mediation Society?

EDMONTON CONVENTION CENTRE
DISPLAY

In the spring of 1983, the Alberta Land Surveyors’ Association was one of a number of groups invited to decorate a feature wall in the meeting rooms in the new Edmonton Convention Centre.

Unfortunately, we were not given carte blanche to do as we pleased, but rather, we were given certain guidelines to follow. We had to coordinate our activities with a representative from Alberta Culture who was responsible for ensuring that all displays followed a similar pattern.

Our display covers an area 14 feet x 4 feet and is made up of mounted photographs, text, plans and field notes, all depicting land survey activities prior to 1930. These include a copy of the Plan and Field Notes of the first survey in the area, namely the survey of the Hudson’s Bay Reserve at Fort Edmonton. We have superimposed the Plan on a 1982 mosaic of the City at the same scale. This brings into perspective just how big an area was included in the original survey.

In addition, we have mounted a copy of Michel Deane’s Survey Plan of Edmonton settlement along with his report. The report includes interesting anecdotes on logistics problems encountered as well as his rationale for the location of the boundaries between certain lots.

The Edmonton settlement plan has been placed beside an air photo oblique of the City taken in 1924, which clearly indicates the influence of Deane’s survey on the subsequent street pattern.

In addition, we have mounted old photographs of survey crews of the period which provides an indication of the effort required and the contribution made by Surveyors in the development of Western Canada.

The feature wall display was completed in September, 1983 in Room 8 of the Convention Centre. Outside the room is a plaque dedicating the room to the “Early Land Surveyors”. Hopefully, with time, the room will be remembered and referred to as the Land Surveyors Room.

The Public Relations Committee wishes to acknowledge the work done by the photo reproduction staff of the Alberta Bureau of Surveying and Mapping for the excellent reproductions of the old photographs.

A.D. Hosford, A.L.S., Chairman
Public Relations Committee

als news winter, 1984
GLENBOW OPENS HISTORICAL RAILWAY SHOW

The dramatic story of Canada's "national dream" - a railway stretching "from sea to sea" - is retold in exciting detail this winter at "The Great CPR Exposition".

The largest exhibition ever mounted by Glenbow, the show traces the arrival and impact of the Canadian Pacific Railway on Western Canada from the 1870s to 1930. The opening of the exhibition on August 11, 1983 commemorated the centennial of the arrival of the Canadian Pacific Railway in Calgary in August, 1983. The exhibition will be on view at Glenbow through May 13, 1984.

Canadian Pacific is generously sponsoring the exhibition and has contributed valuable archival material, artifacts, and works of art to the display. Assistance has also been provided by the National Museums of Canada. "The Great CPR Exposition" has been organized by the Glenbow Archives with assistance from virtually every other museum department.

No other company has played as major a role in the shaping of modern Canadian history as the Canadian Pacific Railway. With the driving of the last spike in 1885, the young nation of Canada was linked to the West for the first time. The CPR was to have a lasting effect on virtually every aspect of western Canadian life: industries, settlement and immigration, the Indian and Metis peoples, tourism, irrigation and shipping.

The monumental undertaking of a transcontinental railway is vividly recalled in "The Great CPR Exposition". From the first arduous surveying parties to the Rockies in search of an easy mountain passage, through the explosive controversy of the Pacific Scandal, to the backbreaking construction of a railway link across the prairies, the mountains and down to the sea, the exhibition illustrates the brilliant vision and stubborn determination which pushed the railway through.

A generous variety of media-documents, historical photographs, maps, pamphlets and books, posters, works of art, artifacts, models of various scales, several large dioramas, as well as full scale "stage sets" of railway scenes are used in this significant historical exhibition.

Visitors will examine early surveying maps of Palliser and Rogers, telegrams from William C. Van Horne to his wife, letters from Father Lacombe, the free railway pass issued to Chief Crowfoot, letters from the passengers on the first transcontinental railway trip, a dining car setting, a station waiting room, a large operating diorama of the famous spiral tunnels, tourism posters, and the famous "Last Spike".

For additional information and photographs, please contact Joyce Mallman Law at (403) 264-8300.

NORTECH WINS ALBERTA RESEARCH COUNCIL CONTRACT

Early this year the Alberta Research Council announced its intention to enter into joint venture agreements with Alberta firms to conduct research into areas in which the Council has special expertise. Nortech Surveys, a Calgary firm, is the first company to finalize such an agreement. Nortech has a considerable commitment to R & D and is pleased to be able to share some of the costs with the Alberta Research Council.

Nortech Surveys has historically developed much of their own surveying capability beginning with the Transit doppler satellite software in the 1960's. They also were amongst the first to use inertial survey systems, having cooperated closely with Ferrari to develop the Ferrari Inertial Land Surveyor and developing all of the adjustment software.

During 1982 NorTech expanded its inertial survey capability to include a laser terrain profiler and has been using this system in a helicopter to perform route surveys and mapping work. They have also, for the last few years, been extensively involved with the Global Positioning System and currently have several operational receivers.

It is these last two projects that are being integrated with the help of the Alberta Research Council. NorTech plans to develop their differential GPS capabilities and integrate this with the laser altimeter to be able to operate the laser in a small fixed wing aircraft. The helicopter mode of the current system is dictated by the requirement of having to land with the inertial system every 4-5 minutes to perform a "zero-velocity-update". Differential GPS could yield nearly the same accuracy as the inertial system but will result in considerably less operating cost and greater operational flexibility and productivity. The Alberta Research Council believes that airborne GPS will be an asset to many airborne survey applications, perhaps even their own hail project being conducted by their Atmospheric Services Division out of Penhold. Dr. R. Humphries of the ASD is making some of his staff available to assist NorTech, primarily in the area of developing software to post process the laser data. The laser altimeter can record data at a very high rate and may be operated in a scanning mode for this application. Readings are obtained from the foliage as well as the terrain. This data must all be corrected for aircraft motion and filtered to extract the ground profile. Some applications also require data on the foliage itself, such as height, spacing and crown closure of the trees. There is a good opportunity here to develop some innovative computer software. The Alberta Research Council has significant computer capabilities, some of it developed to meet the radar image processing requirements of the hail project.

NorTech is currently using its IT 4100 GPS receivers operationally and is developing the differential capability. An airborne test of differential GPS has been performed and the data will soon be processed and evaluated.
LAND SURVEYORS PROFESSIONAL LIABILITY INSURANCE

The increasing number of Professional Liability Claims whether groundless or legitimate will have an inevitable effect on your profession and its financial wellbeing. There will always be clients who feel the work performed was not satisfactory for that of a Professional. In addition, no one is infallible. You as a Professional, may be found liable for a substantial monetary loss suffered by your client.

Why should you protect yourself and your business with Professional Liability? Do you really require Professional Liability Insurance? What does it cost compared to the substantial monetary loss you could suffer? Perhaps you are not that busy now and you are not going to make mistakes because you don’t have the number of employees you used to have. Most of this has probably already occurred to you at one time or another. But some of your associates have been sued. Some of the cases were capricious, but with the number of claims that have occurred we know that substantial amounts have been paid by the insurers and deductibles have been paid by your associates.

Let’s examine the real need for Professional Liability Insurance.

The prudent owner of a survey firm will see that as a result of an unexpected claim, his business may be severely curtailed. He may lose his earning power and possibly have his business entirely destroyed. His personal assets could also be attacked.

It is a fact of business life that the creation of a commercial enterprise is accompanied by the creation of many business risks including the exposure to litigation. Personal guarantees may have been made involving personal assets which could be lost.

Many of the Land Surveyors who have had suits brought against them thought they would never be sued. But they have been. There is the case of one land surveying firm that did not have Professional Liability Insurance and were required to spend $20,000.00 in legal fees alone in addition to the award for damages. A considerable amount of time was spent in court which could have been spent on more profitable pursuits.

As is the case for all professionals, land surveyors have experienced an increasing number of liability claims in recent years. The economy has also played its part in the number of claims brought against the profession.

Clients may try to recoup their losses by alleging professional negligence against the land surveyor even though the action is groundless. Money may be held back. There will be the expense of a lawyer. There will be time spent (your own) defending an action or an attempt to obtain payment. If there is Professional Liability Insurance, the insurer will conduct the defense, even if the claim is false or groundless. Launching or defending an action will eliminate or reduce the contemplated profit.

It should be noted that Professional Liability Insurance will respond only to a claim alleging professional negligence. It cannot be used to initiate an action to recover a Hold Back although it will of course come into play if a counter claim for negligence is made after your solicitor has commenced proceedings to obtain the monies due to you.

A drop off in business does not relieve you of the chance of being sued for prior acts. One unique feature of most Professional Liability Policies is to protect the insured for past mistakes. In other words the policy insures the named land surveyors for claims first made during its currency even though the mistake occurred prior to the effective dates of the policy. It not only covers the owners acts, but as well, employees, partners, directors, and clerical staff and will also provide indemnity if for some tactical legal reason they are individually named in the writ. It also insures the firm for the liability of former employees, who at the time the claim is made are no longer employed by the insured firm. This type of policy is referred to as a "claims made" policy.

There is a tendency on the part of the courts to extend the liability of professionals by interpreting the statutes of limitations to commence from the date of discovery of the cause of the injury or damage rather than the date the services were rendered. This tendency is in fact leading us towards an unlimited time liability.

Two Distinct Aspects of the Law

The first is the "liability in contract", whereby the land surveyor will be answerable for his failure to perform with due care and diligence the services described in that contract. It may be a written or verbal contract.

The second lies in "tort liability" which may be defined as a breach of civil duty owed to others. The law will grant remedy that usually is of a monetary nature. Damage to the property of a third party is an example. A house is staked in a wrong location. The owner will sue the land surveyor in contract since the work contractually undertaken has not been properly carried out. During the survey, the survey party damages the property of the adjoining premises. The owner of that property will bring an action in tort against the land surveyor.

The extent of professional liability is subject to an ever changing standard by which the performance of the professional is measured.

Recent court decisions are tending to increase the responsibilities of Professionals in all fields. Increasingly the public is becoming more and more aware of the possibilities afforded by a law suit.

Ian Best, Leslie, Wright & Rolfe

DID YOU KNOW?........

That a pedestrian who is an Alberta Land Surveyor or who is in the employ of an Alberta Land Surveyor and who, while in the conduct of his duties, is required to use the roads or other portions of the highway contrary to the Highways Traffic Act or a municipal bylaw passed under the authority of the Highways Traffic Act, is not in contravention of the Highways Traffic Act if adequate advance warning is given of his presence on the highway by means of signs, barriers or the use of a flagman.

(Adapted from Section 167(2) the Highways Traffic Act. RSA 1980 cH-7)
Surveying will never be the same again.

HERE'S WHY:
Geodimeter® 140 has a unique angle measurement system in a new Total Station that makes it possible to measure the exact angle in a “single face measurement” as opposed to the conventional way of two face measurements.

ANGLE MEASUREMENT
As opposed to conventional optical systems Geodimeter® 140 uses a signal integrated over a surface and the angle information is collected as a mean value of the total circle. Any disc imperfection is then compensated without changing the circle setting and full angle accuracy is obtained in a single face measurement. Collimation and index correction are determined by initial direct and reverse observation and automatically computed in the angle measurement.

DISTANCE MEASUREMENT
The distance measuring part of Geodimeter® 140 is based on the well proven Geodimeter® 120 series of instruments with excellent range, broad beam for easy target location, horizontal distance in 0.4 sec. Unicom speech transmission for communication with the reflector carrier and automatic mean value for high accuracy.

AUTOMATIC LEVEL COMPENSATOR
The system also includes a two axis Automatic Level Compensator centrally located in the instrument to take care of deviations from the plumb line. The orientation of the instrument axis is accurately detected and each measured angle value is automatically compensated for the plumb line deviation.

RELIABILITY AND HIGH PERFORMANCE
Thanks to a powerful computer, Geodimeter® 140 will work unaffected by the type of instrument errors that can occur in conventional theodolites. The computer immediately detects and fully compensates such errors, thus eliminating the need for transiting of the instrument. (Naturally, Geodimeter® 140 can also be used for angle measurements in the conventional way).

PRODUCTIVITY
Geodimeter® 140 has a built in microphone for speech transmission over the infrared measuring beam which greatly facilitates the communication between the instrument operator and reflector carrier.

Measurement data can be recorded automatically by using Geodat® pocket-sized data memory. The processing of data in the office will be faster and easier and thanks to automatic data transfer from Geodat® to a computer, transcription errors will be eliminated.

The high efficiency of the distance meter together with the new angle measuring technique make Geodimeter® 140 extremely productive and easy to handle.

COMPACT, ROBUST AND LIGHTWEIGHT
The new electronic angle measurement system has allowed a compact, convenient design of a robust, lightweight, surveying tool with low sensitivity to mechanical stress, humidity and rough handling in the field.

Geodimeter® 140 is in every crucial respect a unique Total Station, introducing a new era in surveying.

EFFICIENT DATA COLLECTING SYSTEM
Geodimeter® 140 can be connected to Geodat® data memory for efficient and reliable field data collection. Angle and distance information is transferred from Geodimeter® 140 to the Geodat® data memory by pressing just one key. Additional data can be entered via the keyboard. All information normally written in the field book can be stored in Geodat®. The memory capacity is 500 to 1000 measured points, more than sufficient for a whole day's work for most surveyors. Data is transferred from Geodat® to data processing equipment by built-in standard interface.

For further details and demonstration of Geodimeter® 140, contact your nearest Geodimeter® office.
The Early Surveys — Township or Settlement

In earlier days the City of St. Albert was known as St. Albert Settlement. In part, the word “settlement” comes from the method used by the surveyors to lay out settlement or river lot surveys. Prior to the 1880’s, there was no proper system of survey and those who came to St. Albert simply squatted on the land of their choice, hoping that subsequent surveys would recognize their rights. Many of these squatters were Metis and according to French custom, they occupied the land in long narrow lots, facing onto the river.

The story of how St. Albert was eventually laid out according to the “settlement” pattern rather than the township system is a classic example of the common people prevailing against the government policies of the day.

But for the intervention of Father Leduc and others, St. Albert would have been officially surveyed out as part of a township causing severe hardships and destroying the nucleus of the community.

The government had its rationale, of course, in that settlement surveys caused extra work and discontinuities in the regular township system. In Alberta, each
petitioned the Minister of the Interior for a similar survey to the one that had just been
completed for the Edmonton townsite.

Prior to receiving an answer, Michael
Deane, commenced the settlement survey
late in 1882 but was stopped by orders from
Ottawa that all surveying was to be done
according to the township system.

The following article taken from the
Edmonton Bulletin shows that feelings
were running high:

**St. Albert:** The colony of St. Albert is
considerably excited just now and very
much dissatisfied with the unjust manner
in which it seems the people are to be
treated. The inhabitants of this colony have
occupied their lands during many years,
most of them before the transfer. St. Albert
was founded in 1860 by the Catholic
Mission which gathered around it
considerable number of settlers. At present
about 200 families are established on both
sides of the Sturgeon river in a radius of
from six to eight miles to the east of the
mission and six miles to the west. These
families are for the most part half-breeds,
born and reared in the country, which
certainly belongs to them according to
every just title. They have indisputable
rights to the land, rights which have been
granted by the Manitoba Act. New settlers
among us have bought land off the
occupied long before the transfer. We
certainly form the most ancient colony of
the district and so far the most numerous.
And now it would appear that our very
existence is to be ignored. We are to be
treated the same way as an attempt was
made to treat the people of Manitoba before
the troubles! Our right to a river claim

...continued on page 30
Survey Oddities

It may not be widely known how to convert the areas shown on plan R-1 into acres or hectares. In order to avoid embarrassment, excessive loss of hair through head scratching or sleepless nights, we are quoting below the relationship of these obsolete terms.

1 Acre = 4 Roods = 160 square Poles

Parcel B = 3 Acres, 2 Roods, 15 Poles
for a total area of 3.59 Acres.

Hans Krajewski

PLAN
OF
3DIVISION OF PART OF RIVER LOT NO XIV.
IN THE
EDMONTON SETTLEMENT,
ALBERTA.
SCALE 1 CHAIN TO 1 INCH.
Pictured above is a “Block Survey Transit” or Base Line Transit as it is commonly called.

This instrument is owned by Bjorn Rustad, ALS and is the Base Line transit formerly used by George Paulsen, ALS, DLS. (See obituary - Canadian Surveyor, March, 1981.) Mr. Paulsen originally purchased the instrument from the Federal Government (circa 1930) and used it extensively on township surveys throughout Western Canada. He last used it on the survey of the British Columbia-Northwest Territories boundary in 1954. Mr. Rustad used the instrument in 1956 to determine the azimuth of a reference line on the grounds of the Legislature in Edmonton for his ALSA practical examination. He subsequently purchased the instrument from Mr. Paulsen in 1976 or 1977.

The Block Survey Transit was manufactured by Troughton & Simms likely in 1912. It is described in the eighth edition of the D.L.S. Manual as follows:

The instrument for block surveys is a six-inch reiterating transit theodolite. The horizontal circle is graduated to five minutes and read by two microscopes to five seconds. A four-inch vertical circle read to minutes by a vernier, serves as a finder for stars and for measuring angles of elevation or depression.

The telescope has an object-glass of one and seven-eighths inches aperture and twelve and three-quarters inches focus. It has an eyepiece micrometer, the drum of which is divided into one hundred parts, each representing approximately one and two-thirds seconds. The diaphragm and micrometer can be revolved around the axis of the telescope so as to place the movable thread either horizontal or vertical. Precise level bubbles, electric lamps and special attachments are provided for astronomical observations.

The tripod is of the shifting head pattern for adjusting the instrument accurately over the station. Advantage can be taken of this feature for eliminating the effect of periodic errors of graduation in measuring angles the instrument being shifted in azimuth so as to use different parts of the graduated circle.

This instrument was designed for the production of lines, the measurement of horizontal angles and the determination of latitudes and azimuths. These are the most important operations in a block surveyor’s work and with this type of instrument great precision and convenience are obtained.

A more detailed description of the instrument is contained in Bulletin 34 - “Description, Adjustments and Methods of Use of the Six-Inch Micrometer Block Survey Reiterating Transit Theodolite” available from the ALSA library. Sample field notes in this publication refer to instruments numbered 121 and 124 operated by J.A. Fletcher, D.L.S. The instrument in the possession of Mr. Rustad bears the number 126.

The instrument comes in three pieces: (1) yoke (2) scope (3) striding level and mounts on a special tripod made entirely of wood. The instrument fits in a wooden carrying case which contains wrenches, screwdrivers, two additional optical attachments and an offset eyepiece for polar observations. The carrying case and transit weigh approximately 35 pounds. One division of the 20 division striding level is 5.2” @ 46°F. One division of the 20 division latitude level is 2.39” @ 46°F. The instrument was used by the Department of Interior Surveys Laboratory in Ottawa and has a decal on the case dated February 17, 1914.

Brad Sawchuk, A.L.S.
Thank you for the opportunity to address you on the operation of the Occupational Health & Safety Act of Alberta.

My remarks today will not be directed towards any criticism of the contents of that statute or the regulations pursuant thereto. I would, however, like to relay some concerns with regard to what we see as some very glaring omissions from the current legislation.

The current Occupational Health and Safety Act was initially passed in 1976 and has been revised a number of times since, most recently in June of this year. Several major regulations applicable to the legislation are currently under review. The gist of the legislation is to provide a framework for standards and safety in the work place.

The concern of the Alberta Land Surveyors’ Association is with regard to safety in the broad context, not the nitty-gritty “hard hat” legislation, but the overall concept of safety today and in the future.

Our concerns relate specifically to the Coal Mines Safety Act, The Quarries Regulation Act, The Coal Mines Safety Regulation (AR 333/75), The General Regulation (AR 38/57) pursuant to the Quarries Regulation Act, together with the two new regulations, being the General Safety Regulation, 1983, and the Mine Safety Regulation, 1983. These new regulations are apparently intended to replace the former statutes and regulations which will be repealed upon promulgation of the new Mine Safety Regulation, 1983.

As stated in my introduction, our concerns relate more to what is not in the legislation, rather than what is in the legislation. Specifically they relate to the need for accurate plans and records of all underground workings and subsurface pipelines and facilities as they relate to the wider aspect of safety in mining relative to both current and abandoned mining operations.

Safety in Operating Mines

With respect to accurate surveys and plans, there are three major considerations regarding safety in operating mines. These are:

1. protection from explosion, flooding, electric shock, etc., caused by striking an existing underground pipeline or cable during mine excavation or tunnelling.
2. stability monitoring to prevent or foresee slumping of open pit walls or cave-ins of tunnels and shafts.
3. rescue operations to locate and retrieve workers trapped in underground mine shafts or tunnels.

Safety Relative to Abandoned Mine Workings

Underground mines are much like any other buried pipeline or cable; once buried or closed they are often forgotten about until some emergency situation requires that they be located immediately.

At the turn of the century when coal mines were bored in what is now downtown Edmonton, who could have imagined that there would be office foundations sunk into the depths penetrating old abandoned mine workings. Fortunately these problems have to date only resulted in economic problems and not problems with serious safety connotations. It is, however, significant to note a recommendation from the report of Commissioner H.G. Stephenson in the Final Report of the Coal Mines Safety Board of Inquiry which was submitted to you, Mr. Minister, on December 1, 1981. The recommendation reads “Residential development of mined-out land in the foothills and mountains may create a serious hazard if developers are not aware of the dangers from old workings.” Implicit in this recommendation is the need for accurate plans of survey of these mine workings.

Plans and Surveys

The foregoing examples relate to the need for accurate plans of mine workings purely from the safety point of view. It is obvious that these plans are also required for the purely operational aspects of mine management.

Aside from the need for the preparation of plans is the need to ensure that they are prepared accurately and are based on reliable information. Also there is the problem of establishing a depository for permanent storage and access of these plans. Speaking of permanent storage and access, there does not appear to be any statutory requirement that plans be lodged with a public agency and retained in perpetuity. Some plans are available through the Energy Resources Conservation Board, however, the records are by no means complete.

Accuracy is relative. Unfortunately the current lack of standards in the mine surveying field has resulted in mine surveys being based on many different local assumed datums. It thus becomes impossible to relate mine survey information to, for instance, the property boundaries or other control survey grids. Hence, to re-establish the mine location years after the local datum has disappeared becomes impossible. It’s like the old boundary descriptions in Eastern Canada that read “Comencing at an old oak tree near the corner of Sam Brown’s pigsty.”
Just to draw a comparison with European practices, it is common in many European countries to maintain a "subterranean cadastre" which is a legal "as built" record of all pipelines and other buried or underground facilities. The value and relevance of such a permanent public record is obvious from a safety point of view, not to speak of the informational value thereof. The subterranean cadastre is a legal record of all buried facilities, prepared to acceptable accuracy standards and certified by a professional surveyor.

Mine Surveyors

One concern that is directly related to the problem of accuracy is the matter of registration of mine surveyors. It appears that the intention of the new legislation is to dismantle the former system of registering surface and underground mine surveyors. The new regulations indicate that "mine surveyor" "means a qualified worker appointed by the manager to be responsible for surveying the workings of a mine." This lack of specificity will most certainly erode further the lack of survey standards and practices prevalent to the mine industry in general.

If it is the intention of the Government of Alberta to "get out of the licensing business" with regard to "mine surveyors", we would remind you that the new Land Surveyors Act passed in the Legislature in 1981 does allow for the inclusion of associate members and the inclusion of other branches of surveying under the Land Surveyors’ Act. Provisions have been in place for nearly 75 years for the training and registration of professional surveyors. A specialized designation such as "mine surveyor" could easily be accommodated under the Land Surveyors Act and we would be pleased to liaise with practice mine surveyors to establish such a category.

In conclusion, the Alberta Land Surveyors’ Association wishes to emphasize our concerns for the accurate survey and documentation by means of clear, concise and accurate maps and plans of all subterranean pipelines, buried cables, conduits and other underground workings and facilities.

We are pleased to offer our administrative structures and expertise to the Department of Workers Health, Safety and Compensation in looking into this very important matter.

You may be familiar with a conference which we held in September of 1981 entitled "The Second Users Conference on Land Information Systems". Two copies of the Proceedings of this conference are presented for your information. While this conference did not address exactly the same concerns identified here today, there is a striking similarity in the issues.

HER MAJESTY v. ROLAND VERY et al.
(1983 AWLD No. 35)

The question of legal ownership of the bed and shore of bodies of water commonly referred to as "sloughs" in Alberta is the subject of a recent action in the Court of Queen's Bench. The decision of Justice Eggbert will be of utmost interest to all land surveyors even though the decision is presently under appeal.

Facts

The lands owned by the defendants are partially covered by a slough. The slough presently contains water although it has been dry one or more previous years. Pursuant to Section 3(1) of the Public Lands Act (RSA 1980, c P-30) the Crown claims the bed and shore of the "slough" as Crown land. Section 3(1) reads as follows: "3(1) Subject to subsection (2), the title to the beds and shores of all rivers, streams, watercourses, lakes and other bodies of water is hereby declared to be vested in the Crown in right of Alberta and no grant or certificate of title made or issued before or after the commencement of this Act shall be construed to convey title to those beds or shores."

Issues

There is no question that the "slough" is not a river, stream or watercourse. Therefore there are two issues to be decided - is a "slough" a "lake" or an "other body of water" within the purview of Section 3(1)?

Held

Is a "slough" a "lake" - In determining this question the Court found it necessary to define the term lake. The Shorter Oxford English Dictionary merely defines a lake as being a large body of water surrounded by land. Blacks Law Dictionary defines lake as, inter alia, a considerable body of standing water in a depression of land but also as a widened portion of a river. In the opinion of the Court, the preconceived notion of anyone who has grown up in the Prairie Provinces of Canada is that "a lake is a body of water of considerable depth surrounded by a well defined beach or bank and with a reasonably permanent nature where one can swim if the water is not too cold." "A slough is a shallow body of dirty water usually full of weeds and insects or aquatic life where one would not consider swimming." The Court concluded based on these notions that a slough could not be considered a lake without stretching the definition set forth in Blacks Law Dictionary.

With regard to an "other body of water" Justice Eggbert analyzed the meaning of "other bodies of water" under the legal principle called the "ejusdem generis" rule. Under this principle the other must refer to things of the same breed, kind, class or nature. In his analysis he held that "a slough does not fall into the same genus or category (as rivers, streams, watercourses and lakes) and is not included in that term as it does not have well defined banks, it dries up on occasion and it is of no particular value to society other than, perhaps, for the seasonal watering of livestock."

As a result of these two conclusions the ownership of the bed and shore of the slough was determined not to be vested in the Crown in the right of the Province of Alberta.

Comment

This is a very interesting case based on the simple issue of whether a slough is a lake. The conclusion of Justice Eggbert upsets the interpretation of the ownership of the beds and shores of millions of acres of land (slough) in the Province of Alberta. It will be extremely interesting to hear the decision of the Appellate Court on this issue.

G.K. Allred, A.L.S.
What's In A Name?
by
J. Keith Smith, A.L.S.

Shakespeare once said, "What's in a name? - a rose by any other name would smell as sweet."

Fellow Surveyors: in my considered opinion, it is time to do away with the hallowed and revered title of "Alberta Land Surveyor". This title was first bestowed upon an Albertan in 1911, when the first Alberta Land Surveyors Act was passed. Alberta was a new Province and was in dire need of boundaries and qualified surveyors to lay them out. These were great and proud men and worthy of the name, Alberta Land Surveyor - each and everyone - and so it is to this day. BUT THE NAME HAS GOT TO GO.

When there is plenty of work for all surveyors and when we are experiencing "boom" times, everyone is happy with the status quo. However, when times are tough, and there are twenty-five firms looking to do each survey job, and when large firms have to compete with the surveyor working with his son or his wife out of their basement, every surveyor suddenly starts to be concerned with the ethics and professional conduct of his fellow practitioners. Not only are they the members concerned with each other's performance, the elected Council of our Association has been wrestling with the problems of professional conduct, recognition by the public of the Alberta Land Surveyor as a professional, as well as the education, training, and example set by each of us to attract others to the profession to keep it alive.

It is well at this point, I think, to just look at a few issues of Als News and find out how many surveyors are really concerned about our professional status and the attraction of other disciplines to be governed by our Act.

- Spring Issue, 1983 - Committee of the Future. Recommendation - "to be competent and professional"
- Same issue - Wally Youngs - "I am not so confident that the Alberta Land Surveyors' Association has recognized the "CHANGED ROLE OF THE PROFESSIONAL SURVEYOR". (Capital letters are mine.)
- Fall Issue, 1983 - Articles by Ken Allred, Denis Hosford, Hugh Impey - all very concerned with present day practise, ethics and professionalism.
- Same issue - Professional liability insurance, a warning to mine surveyors that they were about to be legislated out of business, and in the front of the magazine, a full page ad with the heading "Surveying will never be the same again".
- Same issue - one last comparison - page 29: Denis Hosford receives an award for his company's contribution to INTERNATIONAL (capitals are mine) Export Marketing Development - page 30; K.F. McCusker with his bib overalls, line cutters, boat men, etc. in the middle of the Peace River.

I think the last example probably best illustrates the change that has taken place in the survey profession over the years - and pray to God that it will continue to do so. The big question is HOW DO WE HANDLE IT? I have watched and participated in the struggle, the arguments, the new and revised legislation, bylaws, codes of ethics, tariffs of fees, examinations, and the why's and wherefores of the proverbial surveyor's certificate. Councils have wrestled for years with these great problems - and they are great problems - and members have come close to wrestling with each other to try to come up with the proper solution to them.

Fellow Surveyors: CAN YE NOT SEE WHAT HAS BEEN HAPPENING?
H ave ye read these articles by your fellow professionals mentioned above? And what's more important, have ye understood what is being pointed out time and time again! Have ye read just the index of papers on file in our own library, written by today's surveyors, just to qualify and belong to our association?

How do we solve all (or most) of our problems? How do we expand our profession and how do we keep our uniqueness at the same time? How do we attract planners, and survey engineers from U.N.B., Bedford Institute and Number College and overseas and those in Alberta? How do we become responsible for mining surveying in the Province? How do we reap the benefits of the school of survey engineering we set up at the University of Calgary and almost guarantee that these graduates will work with us in the future? How do we guarantee our association to be in the forefront of computer technology, geodesy, world wide co-ordinate systems, new datums, AND AT THE SAME TIME guarantee the public the availability of services of professional people that can establish and re-establish and preserve property boundaries, that are so necessary and vital to this society? How do we contend with the most important question of all - one that we may have to answer sooner than we think - that being, how do we make sure WE are the legislated professional body that looks after all surveying and surveyors in the Province and that we remain so?

Well, Gentlemen, I think there is a way to accomodate, assimilate and solve, at least to a great degree, most of the problems mentioned above. I think we had the solution in front of us at the annual meeting in 1980, in Jasper. Here it comes again - WE HAVE TO CHANGE OUR NAME - AND
THE NAME OF THE ASSOCIATION THAT GOVERNS OUR PROFESSIONAL PRACTICE! WE HAVE TO BECOME PROFESSIONAL SURVEYORS OF ALBERTA.

I see at least four branches or areas of expertise or scope of professional service or practice as far as Professional Surveyors are concerned. They are Geodetic, Hydrographic, Mining and Land.

I agree with Tom Swanby, in that each Professional Surveyor would have his own personal seal and he would use it EVERYTIME he signed his name as a Professional Surveyor, thus eliminating all affidavits and legislation to create them. Corporations licensed to practise as Professional Surveyors would have a stamp ONLY. I think all of this enhances the image of a professional in the eyes of the public, and an image that needs to be changed from that of a transit person to that of the Surveyor that is a professional in one or more of the above mentioned divisions, and PRACTISES AS A PROFESSIONAL WITHIN THOSE AREAS OF EXPERTISE FOR WHICH THE PERSON IS QUALIFIED.

If the legislation is in place to create an Association of Professional Surveyors, etc., etc., of Alberta, we would then have the means to offer PROFESSIONAL recognition to graduates of Bedford, Calgary or Oxford or even to those who are charged with the establishment and preservation of boundaries in Alberta - The Professional Surveyor (Land). It is in this manner that we preserve and enhance our unique position of the Surveyor of Boundaries in Alberta, and those who preserve our land tenure systems.

The BEAUTIFUL PART of this whole thing is that Geodesists, Hydrographers, Mining Surveyors or Planners or Cartographers DO NOT and WILL NOT have to become Professional Surveyors (Land) in order to belong to and benefit from membership in a Professional Association. As it stands now, all who would qualify to belong to our present Association, must become Alberta Land Surveyors first - and that, in my opinion, is the major reason we are losing graduate survey engineers to APEGGA. There they become "P. Eng.", gain their professional status within the professional association, and that is the end of it. I think if these graduates could become "P. Sur." and join an Association of PROFESSIONAL SURVEYORS OF ALBERTA, we would be well on the way to preserving our heritage in surveying. We could also, have provision to expand the association to include PROFESSIONAL PLANNERS, or PHOTOGRAMMETRISTS or CARTOGRAPHERS without their having to become an "Associate". Can you imagine a PROFESSIONAL PLANNER advertising himself as an Associate of the ALBERTA LAND SURVEYORS' ASSOCIATION? I can't - but a PROFESSIONAL ACT could be as much theirs as ours - as is the case with APEGGA and the Geophysicists and Geologists.

If the Association of Professional Surveyors of Alberta were to prove that many of the problems facing us now are solved by the creation of this Association, and that we have added other professionals to our ranks, I think we would have no trouble convincing anyone that we are the logical organization to be responsible to the public for the preservation of our land tenure and survey systems in the future. I see the system being adopted nation-wide with even a Council of Professional Surveyors (CANADA) for licensing and exams within the C.I.S. and an Association of Professional Surveyors of Canada for those professionals qualified to survey and help maintain the sovereignty of "CANADA LANDS".

The whole reason for this dissertation stems from the fact that I think a new Act has to be written for the Land Surveyors of Alberta and I hope it is not a new ALBERTA LAND SURVEYORS ACT. If we go the same route that we've travelled in the past, we WILL NOT come up "smelling like a rose!" We will probably become a small insignificant arm of the Engineering Profession because that Professional Association is where most, if not all, of our new surveyors will turn to for professional satisfaction and recognition.

In conclusion, I would paraphrase the last two or three sentences of Rob McCuaig's article in Councillor's Forum in the Winter 1983 Issue of ALS News - "A resolution committee comprised of D.K.F. Dawson, W.D. Usher, G.K. Allred, and C.H. Weir resolved at a CIS Geodesy Seminar on November 17, 1978, that this Seminar goes on record as supporting the establishment of a professional body which will recognize and embrace all relevant segments of the surveying and mapping industry. Such a professional body could include but not be limited to the fields of cadastral surveying, hydrography, geodesy, photogrammetry, cartography, planning and land information systems.

Almost five years to the day has passed since this resolution was adopted unanimously by those at the seminar. Are we mature enough to go 'Professional' and change our name?

If we are ready, and if we can legislate the Alberta Land Surveyor out of existence, then probably we can begin thinking about a legislated LEGAL CO-ORDINATE as the proper "corner" for the tenure of land and for its integration into an earth wide system of computer addresses for land information systems.

WIN SOME, LOSE SOME

Three of the five association members who stood for public office in the recent civic elections were successful. Ken Drake was elected as Councillor for the Town of Grande Centre. Ken Allred was elected as Alderman in the City of St. Albert and Bob Botham was elected as Public School Trustee in the City of Wetaskiwin. Hugh Impy, former mayor of the City of Grande Prairie was defeated after one term as mayor and three terms as alderman. George Baerg was unsuccessful in his first bid for a seat on Stony Plain Town Council.

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als news winter, 1984
MAINTAINING AND EXPANDING THE AGRICULTURAL LAND
BASE IN ALBERTA

A Submission to the Environment Council of Alberta
December 7, 1983
By The Alberta Land Surveyors’ Association

Land is the source of all material wealth. From it we get everything that we use of value, whether it be food, clothing, fuel, shelter, metal, or precious stones. We live on the land and from the land, and to the land our bodies or our ashes are committed when we die. The availability of land is the key to human existence, and its distribution and use are of vital importance.

Simpson, S.R. 1976 Land Law and Registration

With the purchase of Rupert’s Land by the Dominion of Canada in 1870, the government of John A. Macdonald was faced with a domain of public lands five times the area of the original dominion. Railways and settlement were the twin issues of the era. Things haven’t changed much in 100 years. Today railways are still very much in the forefront and we’re here today to talk about settlement.

The problems of 100 years ago were different however - those problems centred on lack of information. Over 200 million acres of territory had been annexed to the Dominion and virtually no information was available as to the boundaries or capabilities of that land. A system however, was devised which would provide basic land information, subdivide the hinterland into manageable surveyed parcels of land for agricultural settlement and establish a geographical framework on which to base land ownership and subsequent land related information. This system was and still is referred to as the Dominion Land Survey or township system and is a symbol of Western Canadian settlement patterns. From an aerial perspective this geometrical pattern has become a hallmark of Western Canada.

Today, however, our problems relate not to a lack of information - but to an overabundance of information - and how to use this information effectively to optimize the benefits of a well developed land base. Expansion of our agricultural land base is creeping along at a snails pace compared to the situation 100 years ago when 27,000,000 acres were surveyed into 160 acre parcels in a single field season.

Basic Survey Framework

The township survey system established in the late nineteenth century was and continues to provide an excellent geographical information base for agricultural land. The common identifier NE 14-48-24-4 quickly translates into a 160 acre parcel of land just north of Millet, Alberta. By consulting the appropriate maps and plans an interested observer may determine a host of ancillary information relative to this parcel such as ownership, land use capabilities, tree cover, etc. Even the unsettled and unsurveyed portions of Northern Alberta may be referenced to this grid. Despite the lack of subdivision in the North, numerous mineral and forestry dispositions are referenced to a series of base lines established with reference to the theoretical township system. All land information is thus related to one simple yet common system.

Expanding the Agricultural Land Base

With the availability of land sensitive data for the undeveloped portions of the Province, it is feasible today to select areas of prime agricultural capability in advance of further more detailed field surveys. With the reams of data available it should also be possible to synthesize the data in order to determine with accuracy the most economically desirable regions of the Province for future subdivision and agricultural development. Similarly, it would be possible to resolve conflicting and sequential land uses on the drawing boards for optimum overall economic development. For instance, if there are lands with productive agricultural qualities which are presently covered with marketable forest cover, it would be reasonable to harvest the forest products, restore the land for agricultural development, subdivide the land and then market same for agricultural settlement. By making use of the presently available information it becomes practical to optimize the potential of the land and avoid conflicting land uses.

In a similar manner, but on a micro scale and using topographic and other more site specific land data, it is feasible to design the subdivision of a township not into 36 square sections as is commonly the case, but into a series of parcels of varying sizes taking into consideration internal roadway systems, prohibitive topographical features such as rivers, ravines, lakes, etc. In this manner a township could be initially designed to consider the lay of the land in order to optimize agricultural parcel sizes and shapes and at the same time provide for roadways, utility corridors, railways, parkland reserves and urban settlements. Such a design would have to be prepared taking into consideration any existing mineral or other dispositions based on the theoretical sections and on other legal subdivisions. It would, however, be desirable to separate these existing uses from other land uses in any event in optimizing the overall settlement patterns. The foregoing proposals are not intended as a criticism of the DLS township system. As a system of survey, a land title system and a basic land information system, there is certainly no better scheme the world over. Especially when you consider that this system adopted over a century ago is the largest systematic subdivision of land on earth, you will appreciate the foresight of our early surveyors and legislators in adopting such a visionary, all encompassing system of land survey. In any event, the basic system is in place and indelibly marked on the face of Western Canada. Future subdivision of unsurveyed territory, however, could easily be designed...
with the existing township system as the basic framework, but with consideration given to non geometrical factors for the internal parcelling.

Maintaining the Agricultural Land Base

In the developed portions of the Province, concern is expressed for the maintainence of the agricultural land base. Land subdivision policies which allow unnecessary fragmentation of land remove viable agricultural parcels from productivity and reduce the size of adjacent parcels such that their continued viability is in jeopardy. Policies allowing for "first parcel" subdivisions and "separations of title" often foster speculative opportunities for country living and other non agricultural uses. Similarly, fragmentation of land by wellsite, pipelines, and roadways almost always result in the loss or underutilization of considerably more farmland than what is initially required for the facility in question. Continued unnecessary fragmentation of prime agricultural land will eventually result in the massive land consolidation exercises presently being undertaken in European and Asian countries. Particularly in the vicinity of urban centres where the demands on both good and poor agricultural land are so critical, the policies respecting country residential and other subdivision of agricultural land must be critically scrutinized with the object of retaining the prime land for the most extensive agricultural operations. One only needs to examine the land use problems and inefficiencies of agricultural development in more densely populated countries to appreciate the potential of an unrestrictive subdivision policy.

Likewise it is essential to maintain a handle on the proliferation of country residential and other non agricultural land uses on productive or marginally productive soils. Urbanization and industrial development must wherever possible be directed to less productive lands in an effort to optimize productivity levels, infrastructure costs and a desirable social landscape for future generations.

Conclusion

The key, however, to future land land planning is to maintain an accessible and up to date integrated land information system. Inherent in this recommendation is the need to maintain an accurate information base through the system of land survey. The cadastral survey fabric must be maintained since it is the basic framework to which all land information is ultimately referenced. Only by maintaining and enhancing this existing fabric can we achieve the total integrated land information scheme necessary for sound land management decisions and actions.

Appended to this submission are two other documents. Firstly, is our 1980 submission on Preservation of Monuments. This submission is self-explanatory, but perhaps beyond the scope of the terms of reference for this Commission. The second attachment is our Proceedings of the Second Users Conference on Land Information Systems which was held in September 1982. The conference served as a prelude to an International Symposium on Land Information Systems which is scheduled for October 15-19, 1984 in the Edmonton Convention Centre. I am certain that members of the Environment Council of Alberta will be interested in participating in this symposium as it poses the theme of the Decision Maker and Land Information Systems.

CCLS NOTES

Education and Reciprocity

Education:

A draft "accreditation program" was tabled and a "notice of motion" made to consider this program at the Spring 1984 Directors' meeting. The objectives of this program are 1) to promote uniformity in the accreditation of education qualification for purposes of registration with provincial bodies; 2) to foster, in cooperation with educational institutions, a high standard of surveying education in Canada; 3) to provide a medium for the exchange of ideas between the universities and the profession as to the educational needs of the profession.

I consider this program to be vital and necessary for the long term direction of our profession. I will be asking Council to review the program in principle and funding. Comments will be forwarded to the Committee by the end of January 1984 in preparation for the Directors' meeting in April, 1984.

Reciprocity:

A national policy on reciprocity for land surveyors was unanimously adopted. This policy is consistent with one of the objects of the CCLS - to promote common educational and technical standards for land surveyors, and the promotion of reciprocal recognition by the governing bodies of land surveyors in each province, of the professional qualifications of land surveyors from other provinces.

I will be asking Council to adopt this policy as amended.

Competitive Bidding & Combines Investigation Act

Much discussion took place on both the concern by all provinces with competitive bidding and the provisions of the Combines Investigation Act.

Ontario has a paper on the "Pros and Cons of Contract Bidding" which I hope to obtain.

Gerard Raymond (Quebec) made an interesting remark that in competitive bidding on price alone "the client may pay less but the public in the long term will pay more."

The consensus was that we must educate the public in the pitfalls of contract bidding.

Newfoundland reported that the Newfoundland government have software in place to select firms by computer. This software includes cost along with other criteria.

I am pleased to report that a motion was adopted to communicate with the Federal Minister of Consumer & Corporate Affairs, outlining CCLS concern with provisions of the Combines Investigation Act as it pertains to professions and particularly land surveyors. In light of these concerns the Minister would be asked to review the Act.

Ontario continues to place the emphasis and enforcement on "Standards", under the principle that "fees will follow".

I have offered to provide the committee with our "Procurement of Professional Surveying Services Policy" when final.

Public Relations

All CCLS meetings are covered by the media.
Quebec/Newfoundland Boundary

About 5 km of the Quebec/Newfoundland boundary previously not marked on the ground has now been surveyed and monumented.

Survey Profession

The publication "Terravue" was discussed at length. Gerard Raymond outlined the objects of the publication as 1) window of the CCLS; 2) educates the public; 3) identifies the services the surveyor provides.

The meeting adopted a motion to establish a Terravue Editorial Committee and prepare for the next issue.

I consider this publication to be an excellent mechanism whereby we can tell the public or the buyers of our services what we do in a professional way. Associations or corporations in other provinces as well as our own association over the years have identified a great need to reach the public. To do a professional job on this is beyond the financial capability of any one association. Only through the pooling of our resources, both in funding and articles can this be accomplished.

Professional Liability Insurance

CCLS began organizing a national professional liability insurance program in 1977. To date there are two basic programs: 1) all provinces with a mandatory insurance bylaw - premium based on per surveyor or per firm rate. 2) provinces without mandatory insurance bylaw - premium based on gross fees. Quebec and Ontario have their own programs.

The committee strongly recommends that since all insurance rates are based on the ratio of number of claims and premiums paid, each association should be involved in all claims. Confidentiality in all cases would be basic.

The committee recommends that education programs are vital to ensure all members are aware of statistics, types of errors, high risk areas, etc.

The principle of "repeat claims raises the deductible" was discussed.

I recommend that the complete report of this committee be studied in the drafting of our own bylaw for professional liability insurance.

Building Location Certificates

This committee is working towards a report later this year. To assist in this first report we are asked to peruse two sample plans and direct comments to the committee.

I will be asking the Consulting Practice Committee (Sid Loepky) to provide comments.

CCLS/FIG 1986 Congress Planning

The committee is working on possible ways in which CCLS can contribute to this congress both on the technical and social side.

I will be asking Council for approval in principle and funding for this.

Members of this committee are Don Yates, John Barber, Ken Allred and Cec Duncan.

National Symposium on the Survey Technician and Technologist

Subsequent to the National Symposium in Toronto in May 1983, a "Plan of Action" group of CCLS was established to: 1) review the recommendations of the Symposium; 2) suggest priorities; 3) clarify the role and responsibility of CCLS, CIS and CACSTT.

I intend to provide a copy of the "Report of the Plan of Action Group of CCLS" to our own Task Force on the Survey Technician, the Education Group and ASSTT.

It was the consensus of the meeting that this subject is "sensitive" to all professional associations.

Task Force Study on Surveying & Mapping Industry in Canada

Discussion took place on the participation in this study by CCLS. It was suggested that CCLS contribute $2000 towards this study. This was considered a good investment in light of what the study would provide.

I am pleased to report that the next meeting of the members and Directors of the Canadian Council of Land Surveyors will be held at the Four Seasons Hotel, Edmonton, Alberta, April 28 and 29, 1984. This meeting will follow our 75th A.G.M. and allow CCLS members and Directors to take part in this special meeting as well.

It becomes more evident with each CCLS meeting attended, that professional land surveying associations and corporations across Canada have many things in common. Potentially these common concerns or issues can be resolved at the national level. It is incumbent on each province as a member, to provide the input necessary to meet the objectives of CCLS. As your Director to CCLS I welcome your individual comments and input on any issue.

R. A. Bassil, A.L.S.
CCLS Director

BOOK REVIEW

The Gulf of Maine Boundary : Reviewing the Issues
By Sue Nichols
UNB Cadastral Studies
Occasional Paper No. 12, 1982 ($5.00)

This paper prepared by Sue Nichols, a University of New Brunswick post graduate student and sessional lecturer should be of interest to all land surveyors with an interest in some of the more spectacular boundary issues.

At issue is the Canada-U.S. boundary between Nova Scotia and Maine which includes the potentially rich Georges Bank mineral deposits. In this 60 page paper Ms. Nichols identifies the issues relative to the delimitation of international boundaries in an interesting and objective manner which can be readily understood by anyone with a fundamental knowledge of boundary determination.

The paper deals with both the historical and the legal aspect of the problem. The relative merits of both the Canadian and American positions in the dispute is discussed from a non-legalistic point of view. Similarly a non-technical discussion of the technical issues makes for interesting reading. An especially informative section deals with the surveyor's role in delination.

On the whole, the paper gives the reader a good cursory understanding of the complexities of boundary determination in the context of establishing international boundaries offshore and should be considered a must for all students of cadastral surveying to gain that broader scope that is necessary to appreciate some of the background and implications of the art of land surveying.

G. K. Allred, A.L.S.
al's news winter, 1984

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SURVEY STUDENTS SOCIETY
AWARDS NIGHT

On the evening of October 13, 1983 the Survey Student Society at The University of Calgary held their annual Awards Night. Members of the Division of Surveying Engineering Advisory Committee were special guests at the Awards Night. Mike Woods, President of the Survey Students Society, acted as Master of Ceremonies for the occasion.

This year 17 awards were presented to Surveying Engineering students for academic merit and involvement in the surveying profession. The awards presented were:

1. The J.H. Holloway Scholarship for U of C Students ($1500) presented to Phil Bates by Ernie Tessari, ALS on behalf of the J.H. Holloway Scholarship Foundation.

2. The J.H. Holloway Scholarship for NAIT Transfer Students ($750) presented to Jim MacKenzie by John Deyholos, ALS, Vice President of the J.H. Holloway Scholarship Foundation.

3. The J.H. Holloway Scholarship for SAIT Transfer Students ($750) presented to Dianne Allen by John Deyholos, ALS, Vice President of the J.H. Holloway Scholarship Foundation.

4. The Shell Canada Scholarship ($1000) presented to Dave Neufeld by Ken Thomson of Shell Canada.

5. The Association of Professional Engineers, Geologists and Geophysicists of Alberta Gold Medal in Surveying Engineering presented to Brent Wanless by Tom Barton, Dean of the Faculty of Engineering at The University of Calgary.

6. The British Columbia Land Surveyors’ Award ($500) presented to Eric Hoerburger by Jack Parnell, Past President of the Corporation of Land Surveyors of the Province of British Columbia.


9. The JMR Instruments Canada Limited Research Award ($3000) presented to Phil Mackenzie by John Watt, President of EDO Canada Limited.

10. The Saskatchewan Land Surveyors’ Association Award ($500) presented to Darwin Moss by Dave Crandall of the Manitoba Surveys and Mapping Branch.

11. The Manitoba Land Surveyors’ Awards ($500) presented to Steve Bossermaier by Brian Dreger of the City of Winnipeg Survey Control Section.

12. The Wild Leitz Canada Limited Scholarship ($500) presented to Lance Laplante by Rick Kourash, Sales Representative for Wild Leitz Canada Limited.

13. The Prairie Surveys Limited Award ($500) presented to Mike Woods by Dave Crandall.

14. The Tony Neidermayer Memorial Bursary ($1500) presented to Kent Pointon by Dean Tom Barton, Faculty of Engineering.

15. The Suncor Incorporated Scholarship in Engineering ($1500) presented to Shelly Watkins by Dean Tom Barton, Faculty of Engineering.

16. The Canterra Energy Limited Scholarship ($1000) presented to Shelly Watkins by Dean Tom Barton, Faculty of Engineering.

17. The Canadian Gas Processors Book Prize ($100) presented to Dave Neufeld by Dean Tom Barton, Faculty of Engineering.

A number of awards received in previous years had, up to now, not been recognized. These awards were:

1. The JMR Instruments Canada Limited Research Award ($3000) received by Bill Falkenberg in 1979.

2. The JMR Instruments Canada Limited Research Award ($3000) shared by Michel Gonthier, Mike Mepham and Richard Wong in 1981.

3. A Natural Sciences and Engineering Research Council Scholarship ($9000) received by Richard Wong in 1981.

4. A Natural Sciences and Engineering Research Council Scholarship ($10,500) received by Richard Wong in 1981.

5. The J.H. Holloway Scholarship for NAIT Transfer Students ($500) received by Doug Cloake in 1982.

6. A University of Calgary Transfer Scholarship ($500) received by Elizabeth Cannon in 1982.

With the attendance at this year’s Awards Night of most of the 91 Surveying Engineering students and almost all the Advisory Committee members, the Advisory Committee was again able to meet informally with the students. A similar format is planned for next year when it is expected that at least 15 awards will be presented.

W.F. Teskey, A.L.S.
START YOUR OWN FIRM WITH DOORS CLOSED
By Susan Lieberman, C.A.

Starting your own firm is a logical option for many land surveyors who may find themselves out of work in these times. However, it is not a move that should be taken lightly. It takes a lot of careful planning for the business to survive. This article discusses some of the factors prospective entrepreneurs should know before they open their doors.

Susan Lieberman is a member of The Institute of Chartered Accountants of Ontario. She is in practice in Willowdale, Ont.

Many people think you need only three things to get started in business - a good product, some money and plenty of enthusiasm.

That’s what a friend thought when he went into business selling a new burglar alarm. The product, which he had designed himself, was better than anything else on the market. And he certainly had enthusiasm! Yet his business died on him.

What did he do wrong? Just about everything! But his main problem was that he hadn’t surveyed his market. He didn’t realize that the premium price he had to charge was more than most people were willing to pay. When cash-flow failed to measure up to his glowing expectations, there was nothing to do but close the doors.

My friend’s fatal mistake was to ignore the fourth essential requirement for going into business - preparation. Like many beginners, he rushed in without any planning.

When clients tell me they are about to start a business, my advice is don’t do it - at least not right away. I explain that having a great new product or service is only part of what they’ll need to make a go of things. They must also possess or be prepared to acquire a range of business skills. These are quite separate from the special knowledge that may be involved in turning out the product or providing the service - but absolutely essential for survival.

“Oh, I can learn as I go,” some say. But this kind of learning can be dreadfully expensive, if not fatal to the enterprise. Most of the learning should take place before the sign ever goes on the door.

Take a Course First

A good place to start is by taking a course in business management. Good evening programs are offered at community colleges, schools and libraries. Or prospective managers can undertake a course of studies on their own, using some of the excellent literature available at libraries or published by financial organizations.

Three of the books that I recommend are: Starting and Managing Your Own Small Business, a Financial Post/Macmillan publication; Running Your Own Business, also published by the Financial Post and Gage Publishing Ltd., in cooperation with the Institute of Chartered Accountants of Ontario; and a fine book available free from the Ontario government called Starting a Small Business in Ontario.

Next - and we’re still discussing the period before the doors open - the individual should make contact with the professionals he or she will need to help organize and then run the business. One of the common mistakes of beginners is to think they can go it alone, calling on a lawyer or chartered accountant only in the event of trouble. But fire-fighting is costly and unnecessary; professionals should be used to keep fires from breaking out in the first place.

CA Can Prevent Failure

A lawyer should be consulted early to discuss such things as licences, permits and a host of other legal requirements that may lie in wait for the unwary entrepreneur. It’s a sorry individual who gets nicely started only to have an inspector walk in with the announcement that something illegal is going on.

In the same way it’s never too early to talk things over with a chartered accountant. He or she can provide invaluable advice about the form of business that might be established. Should it be a sole proprietorship, a partnership or a limited company? That decision may facilitate financing, reduce the owner’s personal liability, or just get you the best possible tax treatment.

Do A Cash Flow Plan

One of the most valuable contributions a chartered accountant can make in the organizational stage is to help in drawing up a solid business plan and cash-flow projection.

The cash-flow projection can tell the entrepreneur whether the enterprise is even feasible. Beyond that it can: (a) indicate how much capital will be required; (b) what the borrowing requirements are likely to be; (c) when the break-even point can be expected to occur; (d) how much profit might be made, etc.

Most of what the individual needs to know in the initial decision-making stage is there in a proper cash-flow projection.

Precisely because it’s so vital, the cash-flow projection must be as sound as human ingenuity can make it. The worst kind is the hopeful projection, born only of enthusiasm. That leads the business person into making commitments and taking on debt loads that can’t be paid for when the time comes.

The best kind of cash-flow projection is based on a realistic appraisal of the market and errrs on the side of conservatism. I recommend building in a cushion by inflating anticipated costs by 10%. Alternatively, an individual might consider making up three cash-flow projections - one that’s pessimistic, one that’s optimistic, and one that falls between the two. It can be a helpful method so long as one is fully prepared to live with the worst case.

Need It For Financing

A cash-flow projection is essential not only in setting up a business but also in financing it. Potential investors, and sometimes even potential suppliers, will want to see where the money is coming from. Lending agencies will also demand to see a cash-flow projection. One that has been drawn up with the assistance of a professional is bound to be a more persuasive document.

The CA’s next contribution - and we’re still not open for
business - lies in helping to set up a system for keeping business records. This is advice some beginners find hard to accept. They often prefer to do the books themselves or to get the part-time services of an aunt who once kept books for a local dry cleaner. The main thing, they are convinced, is to avoid cost and fuss.

But people who approach the matter in this way - and this includes many small business operators - don't really understand what business records are for. They are not kept simply to enable the individual to file income tax returns - although they serve that purpose - or as something to show the loan manager at the bank - although they serve that purpose too. The most valuable function of financial records is to give the manager the information he or she needs to make rational business decisions.

Properly set up and maintained, records provide a living profile of a business operation. They can alert management to developing trends, point to bottlenecks, provide warnings of trouble, and even suggest opportunities. It's no exaggeration to say that well kept records are usually the mark of the efficient manager. Shoebox accounting is usually the mark of a person who should really be doing something else.

When he or she is brought in at the beginning, the CA can advise the manager on the most appropriate form of record keeping for the operation. Should it be manual or computerized, a one-write system, a one-book system or a multi-ledger system? Because all businesses are individual, record keeping systems deserve to be as well.

Apart from these considerations, there are personal factors that should be taken into account when an individual contemplates leaving paid employment in favour of going it alone.

The attractions are undeniable - independence, the opportunity to make your own decisions, the prospect of making more money than might be possible as a wage slave. In the nature of things, however, every pro seems to have its con. Independence can be lonely, decisions can be bad as well as good, and the chance of making more money contains the risk of losing everything.

In the end, it's very much a matter of individual character. Some people thrive on the uncertainty of business, others can't live with it. Some people can't handle the risk factor. Still others lack the leadership qualities required in a business that involves employees.

These are all matters that require serious contemplation before the step is taken. Those with doubts should seek the opinions of experienced people who know them well.

There's a final quality that shouldn't be ignored in any personal assessment - aggressiveness. One of the failings of my friend who tried to make a go of burglar alarms was that he was just too nice. He couldn't get tough with people who didn't pay promptly.

Collecting money is one of the most difficult jobs facing the small business operator, especially today when everyone seems to be trying to hold back on everyone else. You have to be aggressive to do it properly. You also have to be aggressive if you're going to win necessary new business in a time of shrinking markets. The prospective entrepreneur who lacks that critical quality might do better to stay put and enjoy a regular pay cheque.

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SEMINAR ON "ADJUSTMENT & ANALYSIS OF SURVEY DATA
 Edmonton-February 21, 22, 23, 1984
 Calgary-March 6, 7, 8, 1984

SEMINAR PROGRAM

This program is directed to the practising surveyor and engineer, and to those individuals who are preparing for the spring examination in Adjustment and Analysis.

Several practical papers will be presented complete with numerical examples.

Seminar material includes a printed 350 page volume of papers published by The Canadian Institute of Surveying, E.J. Krakiwsky, editor.

PROGRAM

Day One
1. The Need for Adjustment & Analysis
2. Review of Linear Algebra
3. Preprocessing of Observations
4. Least Squares Adjustment

Day Two
1. Preanalysis
2. Statistical Post-Analysis
3. Step by Step Methods
4. Introduction to Advanced Adjustment Techniques

Day Three
A day long tutorial will be conducted by E.J. Krakiewsky for persons planning to write the Western Board Examination in Adjustment and Analysis. There is no additional charge for attendance on the third day.

Seminar lecturers will be selected from the following:

J. Adams - McElhanney Surveying & Engineering
J.A.R. Blais - Assoc. Professor, U of C
K. Frankich - Instructor, B.C. Institute of Technology
R. Gareau - Surveys & Mapping Branch, Federal E.M.R.
E.J. Krakiewsky - Professor, U of C
G. Lachapelle - Nortech Surveys Inc.
M. Mepham - Research Associate, U of C
S. Nakiboglu - Associate Professor, U of C
A. Peterson - Associate Professor, U of A
K.P. Schwarz - Professor, U of C

FEE: $180.00 includes all necessary materials and lunches for day one and day two.

LOCATION: Edmonton Seminar - U of A Campus
Calgary Seminar - U of C Campus

FOR FURTHER DETAILS on the program, please contact:
Craig Barnes in Edmonton at 427-3138
Ed Krakiewsky in Calgary at 284-7377

SUMMER EMPLOYMENT WANTED

Summer employment wanted, May 1 to September 1, 1984 to work as A.L.S. or lesser capacity such as party chief or drafted person. Specialization is in subdivision and road surveys, prefer Calgary and surrounding area. Phone 238-3386 (res.) or write Allan Neilson, A.L.S., 60 Woodfern Rise, S.W. Calgary, Alberta T2W 4S2
...continued from Page 17

survey is not to be recognized. We are told we must be
contented with a township survey. Such arrangement is
both unjust and absurd for it ruins the whole settlement.
Not a single old settler who would not find all his
improvements cut up and in most cases, lost altogether,
and in many cases two, three and even four settlers would
find themselves on the same half, or even the same
quarter-section since the river does not form a boundary in
the system of township survey. Our population is peaceful,
calm and submissive, but if such injustice is to be acted
 toward them, if they are to be treated as a conquered
people; if they are not to receive, and that in all justice, what
has been given to Edmonton, Prince Albert and throughout
all Manitoba, they will protest and give in to nothing short
than open force.

Signed for the population of St. Albert.

H. Leduc,
St. Albert, December 26th, 1882

Subsequently, a meeting was held in the St. Albert School
as described in the Edmonton Bulletin, January 1883.

"A public meeting was held at St. Albert at which about 75
of the principal residents of that settlement were present to
decide what action should be taken in regard to the survey of
their claims. Mr. Deane having received orders by last mail to
cease work at once...Last summer when Mr. Deane
commenced the survey of the river claims at Edmonton, a
petition had been forwarded to Ottawa by the people of St.
Albert asking for a similar survey, as Mr. Deane had completed
his work at Edmonton. The reply from the deputy surveyor-
general had been recently received and was to the effect that
the settlement was already laid out by Messrs. Beatty and
Simpson and that settled the matter. (Note: This reference is to
the township survey which had been extended through St.
Albert by Beatty and Simpson in 1882.)

"...All at the meeting considering it most unjust that this
oldest and largest settlement in this part of the country should
have been ignored by the government and that they, the oldest
settlers, should have land practically taken away from them,
as it would be if they were obliged to abide by the township
survey. A resolution was carried unanimously to send a
delegate to Ottawa to look after the interests of the St. Albert
settlers in this connection, they to pay the expenses."

Dan Maloney, (grandfather of Edmonton resident Dan
Maloney) and Father Leduc were elected to go to Ottawa. A
short time later the settlers were informed that a special
settlement survey would be carried out by Mr. Deane, that
spring. His survey subsequently formed the nucleus for
today's city.

There are no known pictures of the early surveys or
surveyors for the St. Albert area. Copies of any pictures, letters
or anecdotes would be welcome.
CASH FLOW MANAGEMENT
IS THE KEY

Alberta Land Surveyors in attendance at the ALSA Business Practice Seminar were advised to ensure that they have close control over their cash flow at all times. Increased costs and slow paying clients can soon force an otherwise viable company into receivership. By maximizing cash flow, a firm can be sure of having a cushion of liquidity that will help absorb the shocks of our uncertain times. Unless the recent economic record improves many firms could be in problems in the uncertain times ahead unless they have a strong liquid position to help weather the storm.

In addition to cash flow management, lectures and discussions led by Don Zingle, C.A. of Thorne Riddell dealt with practical problems in purchase vs. lease or employee ownership of vehicles or other major company assets. New work in progress and tax loss rules were also discussed by Thorne Riddell accountant, Tom Wightman, C.A. The one day seminar was organized by the Education committee in consultation with seminar leader Bill Corbett, C.A. also of Thorne, Riddell and Company, chartered accountants. Twenty-six Alberta Land Surveyors were in attendance.

Members interested in further Business Management Seminars are advised that the Federal Business Development Bank offers a continuing series of Business Seminars touching on a wide variety of common concerns.

THE SAIT LINE

Hello to you from SAIT. We are interested in keeping you informed about some things that are happening here at the Olde Teche.

Many of you probably have been at SAIT at one time or other, and you may know some of our staff members as well as our premises. But let me start with our newest staff member, Paul Delorme.

Paul joined the Surveying Technology Staff last September to take the position that was vacated with the departure of P.J. Timoschuk. We wish Pete the best of luck in his career as a private surveyor. Paul joined our staff from Nortech, (formerly Sheltech) of Calgary and brings with him a varied background of experience in off-shore and satellite and inertial positioning as well as geodetic surveys and more conventional techniques.

Paul graduated from the University of New Brunswick with a Bachelor’s Degree in Surveying Engineering. Paul and Neil Coy, A.L.S. are working together to implement the use of the Wild GRE-2 and GRE-3 data collectors. These field data collectors are being used by our second year surveying students in some of their field exercises. We are just getting started so I cannot tell you much about our experiences, except that the students really like using them and show a great interest.

Other changes are taking place as well, but we thought we would tell you a ‘bit at a time’. One thing I want to mention is that we had some room for more students this year. Enrollment was down from previous years. So if you are thinking of coming to SAIT, or if you know of people that are interested in coming, please contact us (see below).

I also want to take this opportunity to thank those ALS members that have served as members of our Advisory Committee, now or in the past. This type of contact is very valuable to us, even though we may not always be able to follow the advice given. We want to thank you for your time and effort on our behalf. Your involvement is always much appreciated.

We hope to be back the next time with some more information about SAIT.

Merry Christmas and a Happy New Year from the Surveying Technology staff at the ‘Olde Teche’!

A.D. VanderVliet, Program Supervisor

Surveying Technology, Drafting Department
Southern Alberta Institute of Technology (284-8420)
Registrar’s Office
1301 - 16th Avenue N.W.
Calgary, Alberta T2M 0L4 (284-8841)
ALBERTA HOUSING SPONSORS INNOVATIVE HOUSING GRANTS

Do you have an innovative scheme to reduce red tape and cut subdivision costs? Have you devised a pet monumentation plan? Did your cost saving subdivision design get rejected? Revive those good ideas, apply for an Alberta Housing grant, research and document your innovative designs and see if they can be put into effect.

The Alberta Department of Housing offers financial assistance to individuals and organizations to encourage research and development of innovative housing programs which will reduce housing costs or increase housing quality.

The Innovative Housing Grants Program is intended to encourage, sponsor and assist research and development in the fields of housing, subdivision design, site servicing, urban development and energy conservation. Any individual, consultant, survey firm or professional association is eligible to apply for a grant of up to $25,000 under the program. The program is intended mainly for innovative housing techniques as opposed to actual construction.

Possible applications of the the grant program of interest to land surveyors might be to do with innovative subdivision design, cost saving subdivision posting techniques or streamlining of the subdivision and plan registration process. The program is open ended and not intended to restrict applicants to current legislative trappings. The purpose of the program is to generate ideas which could be applied to lessen housing costs or improve housing quality.

Sample projects which have been completed to date include an alternative cul-de-sac design, a cluster in-fill project, development agreements and innovative subdivision design.

With a slow winter ahead, this year might be an ideal time to put some of those ideas of busier times down on paper for the benefit of the entire housing industry.

Further information may be obtained from Robert Sloat, Manager, Research and Development, Alberta Housing 427-8150 or by contacting the Alberta Land Surveyors’ Association office.

ADDITIONS TO THE LIBRARY

A History of the Rectangular Survey System
U.S. Department of the Interior
Bureau of Land Management

Alberta’s Twentieth Legislature
Alberta Teachers’ Association

Cadastral Studies Lecture Notes
Teskey, Swanby, Usher, Hittel
University of Calgary

Collected Papers - Geodetic Survey - 1981
Surveys and Mapping Branch
Department of Energy, Mines and Resources

Graphics Interface (Proceedings)
National Computer Graphics Association of Canada

Gulf of Maine Boundary: Reviewing the Issues
Sue Nichols, U.N.B.

How to apply for Government Approval of
Coal Projects in Alberta
Energy Resources Conservation Board

Land Registry Office Searching Manual (Ontario)
Izaak de Rijcke, B.Sc., O.L.S.

Position Location & Navigation Symposium
Institute of Electrical & Electronic Engineers, 1978

Procedures & Standards for a Multipurpose Cadastre
National Research Council

Seminar '82' (From Blazes to Coordinates)
The Association of Nova Scotia Land Surveyors

Tax Aspect of Incorporation
Thorne Riddell

Tax Planning for Professional & Executives
Jack Bernstein

The Practical Implications of Slow Growth
- Do We Really Need to Plan?
Faculty of Extension, U of A

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**SPECIFICATIONS**

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